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CANADIAN GEOGRAPHICAL JOURNAL

UNIVERSITY OF MICHIGAN
MAR 22
PERIODICAL READING ROOM

Sampling the maple sap

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Quebec Provincial Publicity Bureau Photograph

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Oslo as seen from the harbour. In the new City Hall (centre) the author attended the opening session of the International Folk Music Conference last summer.

Oslo, Cultural Centre

by MARIUS BARBEAU

Photographs courtesy of author except where credited.

AT OSLO, Norway's extremely northerly capital and centre of culture and art, I represented Canada at the International Folk Music Conference, held under the auspices of UNESCO, early in July 1955. During the week, the program for the many delegates and their hosts brought out cultural traits, not only of Norway, many other European countries and North America, but some of those of even the Slavonic areas. Scandinavian in its setting with a tang of the north, the conference was none the less international. Where music, the dance, folk arts, and mythology are concerned, frontiers must be forgotten and it must be realized that the world stays a unit and that its populations are interrelated: they go back to the same cradles of civilization.

After reaching London, we travelled north to Newcastle, then sailed to Bergen. This seaport is a fishing centre, quite rocky and barren, but picturesque. It is surrounded by hills and mountains. In parts mediaeval and modern, its front consists of a row of ancient wooden houses, on which carved figureheads and statuettes represent the unicorn and dragon, these legendary creatures facing the sea. From here we travelled south-east on a night express, across high mountains covered with evergreens and white with snow until the end of June. The next morning Oslo welcomed us, basking in

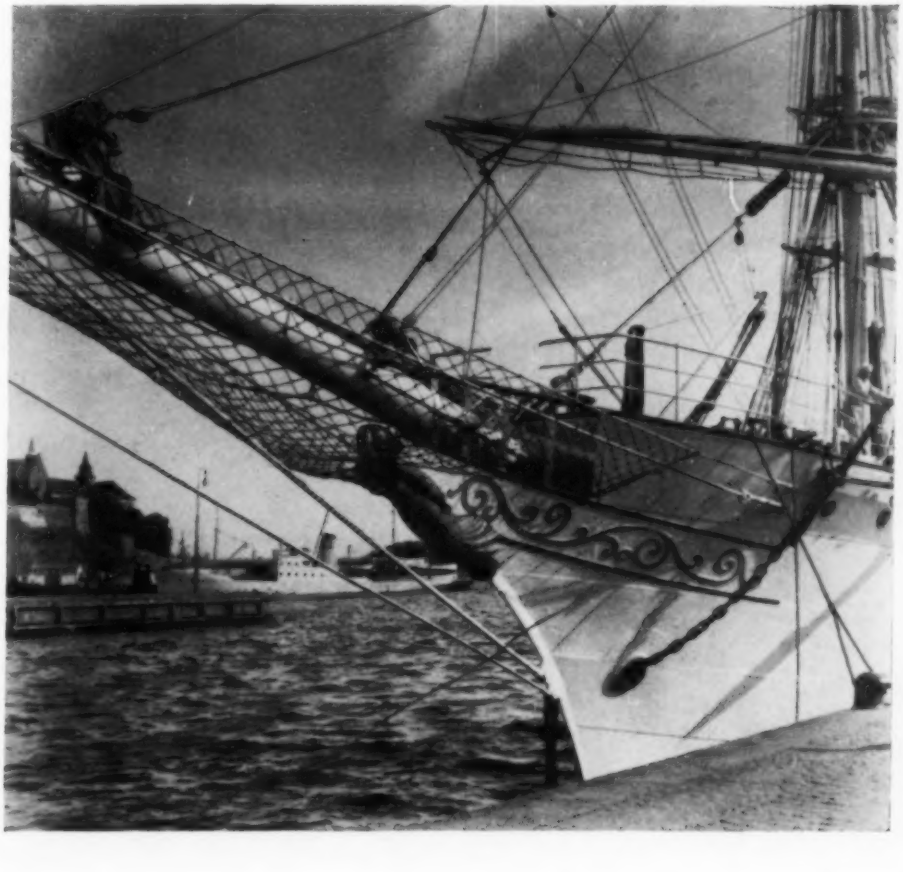
the mellow light of the northern sun. We had been travelling for more than twenty hours.

Walking out of the modern Viking Hotel, in the afternoon, and proceeding along a broad boulevard leading to the Royal Palace, we were amazed to see an immense crowd gathered, as if expecting a ceremonial event. We climbed a low wall and stood still. We were about to witness the departure of Her Majesty Queen Elizabeth of England and the Duke of Edinburgh, who had come to pay a visit to Norway's elderly monarch, King Haakon VII. The cortège passed out of the gates and moved slowly towards the Royal Navy cruiser awaiting in the port, past the state theatre, with its tall statues of Ibsen and Björnson, and the new City Hall.

It is in keeping with history that the British and Norwegian monarchs should have bowed to each other, as they had just done, as a pledge of alliance. For Norway and England are natural allies. They have known of each other since prehistoric times. The North Sea between them has proved to be a link rather than a barrier. The Norsemen have always been a maritime folk, fishing off the coasts or probing the high seas to the west on their way to other lands—Scotland, Iceland, Greenland and Labrador. Their descendants still have scattered footholds abroad. For instance, the Shetland Islands in the north of Scotland are Nordic; their settlements antedate the fifteenth century. The invasion of Normandy and England by William the Conqueror, with the social upheaval it brought about, was another manifestation of Nordic power in the north-western parts of Europe. The Normans (North Men) mingled with the native populations they had conquered, as had done the Romans a thousand years before, thus forming, one after the other, the present complex of culture, language, and government. The ground long ago was well prepared for common understanding and inspiration in culture and the arts.

The visit of the Queen and the Duke was a fitting curtain-riser—though unintended—for the opening session of the International Folk Music Council in the City Hall the next day. This stately modern hall was filled to capacity, mostly by representatives of Oslo society attired in colourful folk costumes and headdresses, and by folk-dance groups that had come from several European countries. Opening addresses by King Haakon and various dignitaries reminded us of the purpose of the event. Here it is as expressed in the official program:

"Folk music, in which is included dance as well as song, is a fundamental form of expres-



One of the two Norwegian training ships in the port of Oslo. Like the ancient brigantines it has as its figurehead a siren carved out of wood.

An ancient Norwegian stave church at the Norsk Folkemuseum in the wooded park at Bygdoy near Oslo. This and other old buildings and a collection of antique furniture and equipment tell the story of village and rural life in Norway long ago.

Intricate wood-carving mellowed by time adorns the old stave church (above) in Bygdoy's open-air museum. The church, brought from the village of Gol in Hallingdal, was built about A.D. 1200. It is an excellent example of the churches of the period.

sion which has been evolved by the various communities through the process of oral tradition . . . It embodies elements which are common to the whole of mankind . . . Owing to various causes, including the urbanization of village life, social cleavages and above all the pervasiveness of mechanical music, the traditional practice of folk music of many countries is in danger of being irretrievably lost . . . The Council which was founded in 1947 has set itself the task not only of preserving the traditions and forms for the purpose of scholarly studies, but of showing their significance in the social and artistic life of to-day and of encouraging their use in education and recreation . . . The outcome is to promote understanding and friendship between nations through the common interest of folk music."

The program, from beginning to end, followed the directives as stated. The speeches no sooner were over than a procession of costumed Norwegian dancers made its way forward in a chain dance, to the accompaniment of a folk song. The figures in the frescoes on the vast walls seemed to come to life and to join the cohort of dancers in its coil-like progress. After the opening dance, Hardanger Fiddle players came forward and, first in a group, then in solos, produced lively, lilting tunes on this Norse violin—an instrument with twice as many strings as the ordinary violin. Ole Bull, the famous Norwegian violinist, once brought the music of his country to the attention of Europe with this instrument.

In the following days, the program moved on, some of its numbers held in rooms, others in concert halls or in the open.

To give an idea of the work of the folklorists in Europe and elsewhere, here are some of the subjects listed:

The tradition, music forms and style of the Hardanger Fiddle, by Anne Björndal; *Some folk fiddlers' habits and styles in Western Pennsylvania*, by Samuel P. Bayard; *Norse influences in Shetland music*, by Patrick Shuldham-Shaw; *La danse des rubans*, by Carmelina Naselli from Italy; *Songs of the Slovak mountains*, by Karel Plicka; *Singing contests in Central Asia*, by E. Ermsheimer; *Greek song dance*, by Solon Michaelides of Cyprus; *Harp songs from Uganda*, by K. P. Wachsmann; and, by the author, *Rondes from French Canada*, and so on.

In Oslo's Frogner Park stands a fifty-foot monolith by the Norwegian sculptor Gustav Vigeland. It depicts man's aspirations.

The summary of a single paper provides further illustration—*Scandinavian Folk Music —a survey*, by Eric Dal of the Royal Library, Copenhagen:

"This paper deals with the folk music of Norway, Sweden, Denmark (with the Faroe Islands), and, partly, with Iceland and the Swedish population in Finland. These countries form the area of the closely related North-Germanic languages. The children's songs, lyrical songs, and religious folk tunes of these countries are briefly mentioned; more important than these are the shepherds' calls with their archaic tunes, and the ballads, which in the Middle Ages, and still in the Faroe Islands, are chain dance tunes. Their form is stanzaic with two or four lines and a refrain. The instrumental music shows many types of instru-

A group of Yugoslavian dancers in brightly coloured costumes who were among those performing.
Norsk Telegrambyras

ments and of—mostly post-Renaissance—dances. In the community of today, the genuine tradition is in most respects extinguished, and the folk dance based on revival."

In actual performance, the chain dance of these Faroe Islanders in costume proved outstanding. Had there been a first prize, it would no doubt have been awarded here. Their tunes and style of singing and dancing reminded me of certain Shetland chants, and more particularly of the milling songs (*wauking* songs to accompany the shrinking of homespun) of the Gaelic settlements of Cape Breton Island in the Gulf of St. Lawrence.

The international character of the folk dance was stressed, in particular, by Patrick Shuldham-Shaw. This was evident both in his summary and later in his presentation:

"Throughout history Britain has had many contacts with Scandinavia which have left their mark on its folk music and dance. The sword-dances of North-East England were probably brought over originally by the Danes in the ninth century and the Dirk Dance from the Isle of Man is considered to be of Viking origin . . . In the island of Papa Stour, some interesting dance tunes are known, in particular the famous sword-dance."

Another paper, titled *The Ueberlinger Sword Dance*, had this to say:

"During the Middle Ages the sword dance was customary throughout the whole Germanic cultural region. It dates back to primitive Germanic times. Tacitus relates in the 24th Chapter of his *Germania* that the Germans had only one form of public show, which was the same wherever they foregathered. 'Naked youths, trained to the sport, dance among swords and spears that are levelled at them' . . . In the sixteenth century the sword-dance was

Three Russian girls sing and accompany themselves on a popular Russian musical instrument.
Norsk Telegrambyras

general, not only in the whole Germanic linguistic region, but also in the Netherlands, Scandinavia, and England."

The sword-dance has spread to Canada and is still performed in the Murray Bay area on the north shore of the St. Lawrence River below Quebec. Introduced following the establishment of the Murray Bay *seigneurie* by John Nairne, a general under Wolfe in 1759, the sword-dance could not be taken up as such by the French-Canadian *habitants* who had no swords to dance with. It became the "garter dance" (*danse de la jarretière*) among them, for they substituted braided woollen garters. Miss Voyer and Miss Dumais, representing Université Laval at Oslo, actually performed the garter dance as an illustration for the author's paper on Canadian folk dances.

The axiom somehow came to prevail during the conference that "dancing keeps away old age." At several social functions, in the halls and in the open air, there was folk dancing which the delegates joined in with their Norwegian hosts—for instance, at the Folk Dance Ball, at Oslo *Radhus* (City Hall), and also in the Procession of Dances through the streets of Oslo.

The concert of modern music based on folk tunes at the *Norsk Rikskringkasting* at Kringkastingshuset, under the direction of Öivin Fjeldstad, developed into a major event; for this state orchestra is one of the best in Europe, and the first number on its program was an important orchestral composition by Geirr Tveitt, a disciple of Edward Grieg. Two other numbers were by Solon Michaelidis, a member of the conference representing the Conservatory of Cyprus in the Mediterranean, who was present and was greeted with applause. This concert stressed the cultural importance of folk tunes and dances in the development of modern musical language in the various countries of the world.

One afternoon was spent at the Open-air Museum (*Norsk Folkemuseum*) at Bygdöy in a picturesque district a short distance out of town. Throughout the forested park many

A group of Finnish dancers. The international nature of the folk dance was stressed at the conference.
Norsk Telegrambyras

A pair of Norwegian dancers. Scandinavian dances and folk music have influenced the folk dances and music of Britain. Norsk Telegrambyras

of the same type to be built up on top of Mount Royal as a cultural centre. But his vision found no sponsors here, and his plan was torn to pieces and forgotten after his death. An open-air museum now is being planned for the new National Park in the Chelsea area north of Ottawa. It will bring Canada's capital into line with other cultural centres, and will also be a tourist attraction.

The Canadian cruiser, *Ontario*, and the Royal Navy's aircraft carrier, *Bulwark*, happened to arrive at Oslo the day after the excursion to the Open-air Museum at Bygdöy. As the representative of the National Museum, I was invited to the reception held on the first of July—Canada's National Day—at the Canadian diplomatic headquarters. A large number of officers also came at the invitation of our host, Mr. Chester Ronning. That very day news arrived that Mr. Ronning had been promoted to the rank of Ambassador of Canada to Norway.

At the waterfront the visiting vessels were moored close to two Norwegian training ships, with tall masts and large sails and the carved figureheads of sirens in the manner of ancient brigantines. At times the young sailors were called by bugles to their posts for practice, and they climbed the cordage with squirrel-like agility. This Norwegian school for seamen helps to keep the nation near the forefront among the navies of the world.

A noticeable feature which drew the admiration of the delegates from abroad was the important role filled by the National Broadcasting Corporation of Norway (*Norsk Rikskringkasting*), during the sessions. The Head of the Program Department, Dr. Thorstein Diesen, and his assistants were not merely the corporation's employees as in North America, but

wooden buildings appertaining to ancient village and rural life in Norway have been erected. The houses and halls are filled with antique furniture and equipment. Many visitors stroll there on their holidays. For the benefit of the members of the Council, several folk-dance groups from various continental and other countries attending the conference, performed their dances on the stage of a small open-air amphitheatre. Here the most attractive group was a French one with costumed dancers and singers from Southern France.

Folk museums are no monopoly of Norway. Another one as interesting as that at Bygdöy may be seen near Copenhagen, and a third in the vicinity of Amsterdam. In the United States the same idea has been developed at Williamsburg and elsewhere. The late Clarence Gagnon, Montreal painter, was so fascinated by the Bygdöy museum that he almost adopted Norway as a home, and he elaborated a large plan in high-relief for a Canadian model-village

A group of German folk dancers.
Norsk Telegrambyras

A Russian couple perform one of the vigorous dances of their homeland.
Norsk Telegrambyras

were real authorities, in charge of folklore research and keepers of folk-song and dance archives. These are national archives and they are among the most important anywhere. I can do no better than to close this account of my visit to Oslo with a quotation from Dr. Diesen's address at the reception for the International Folk Council's conference in Broadcasting House on 29 June:

"Before proceeding further in this program, I should like to add a few words on the conditions of the folk music in our broadcasting. I am sure you will hear statements on the traditions of Norwegian folk music and its position in Norway on the Congress and from that you will understand how natural it was—from the very beginning of the broadcasting here in Norway—to get the folk music inserted as part of our musical programs. The first more casual programs had already been on the air before I was employed as a collaborator here in 1926—but it was evident that they gathered —so to speak—a certain 'congregation' that understood and appreciated it—and it was therefore quite natural to me, who at that time —as I may remark parenthetically—constituted the whole Program Department practically alone, only with two clerks as assistants—to have regular contributions of folk music in the program. In this work I got the most efficient support by the late professor Knut Liestöl, who was a folklorist at the University and had the most intimate knowledge even of the musical treasures we possess in our folk tunes—and from this slight beginning the folk music has worked its way to a regular weekly program and besides inserted in the usual home service both as independent broadcasts and as separate items in connection with other musical or regional programs.

"It would not be just of me to say that these broadcasts have been universally appreciated by our listeners, but it is quite certain that they have created an increasing understanding of the treasures conserved in our folk music; and this has especially been evident during the last years since we got a permanent collaborator to deal with this part of the musical service. We have further organized a discoteque* comprising about 3,000 numbers and continue our systematical compilation of folk tunes and traditional folk music . . . "

*discoteque—meaning archives or library of phonograph records.

One of the four dioramas, which are three-dimensional displays showing fish in their natural environment. This one shows a muskellunge lurking in its aquatic jungle. Cold cathode light tubes, coloured filters and painted highlights and shadows provide a cool, "underwater" effect. The fish models are held by cleverly hidden or camouflaged wires or supports so they appear to be swimming.

The Gallery of Canadian Fishes

by F. H. WOODING

Department of Fisheries of Canada photographs

INDICATIVE of the cultural growth of Canada is the greater attention being paid in many provinces to the importance of museums. The value of such institutions, both for their educational worth and as logical repositories for collections of objects representing the record of Nature and the arts of man throughout the ages, has been evident to scientists and educators for many years.

In the past decade Canada has made significant progress in museum work and, while still behind some other countries, is now gaining the kind of momentum that in the not too distant future may make her one of the leaders in this field. The beautiful new Saskatchewan Museum of Natural History, in Regina, opened in May 1955 is an example of this trend.

One of the largest and most important of all Canadian museums is the Royal Ontario Museum, Toronto. This public institution was founded in the early days of the University of Toronto with which it retains a close association. In its three divisions — art and archaeology, geology and mineralogy, and zoology and palaeontology —as well as in its field work, publications, and education and extension programme, the Museum has won world-wide respect and a place of importance that are a credit to itself and to the nation. Many of its collections, in fact, are unique, while its scientific publications — a number of which are major works — are rated as outstanding.

Museums everywhere, however, lean heavily upon outside sources for support, not only for

financial assistance from private benefactors but for the loan or outright gift of rare and valuable collections. Being public institutions, museums thus provide opportunity for individuals and corporations, as well as governments, to contribute substantially to the advancement of knowledge and the cultivation of a public interest in the culture of the past and the present.

Facilities and Purpose of the Gallery

An example of government support is the Royal Ontario Museum's new Gallery of Canadian Fishes, which was opened in March 1955 after nearly five years of preparation. This gallery, a co-operative effort of the Museum and the federal Department of Fisheries, Ottawa, is considered one of the finest of its kind anywhere in the world and incorporates design and technique new to exhibition work.

The Royal Ontario Museum, through its affiliation with the University in Toronto, has for many years been used by students, particularly by those seeking science degrees. Its modern facilities, excellent specimen collections and fine library, in addition to the fact that the curators in charge of departments and other specialists lecture to the students in the University, have brought the Museum into a close academic relationship with those interested in geology and mineralogy and the various fields of biology. The Museum is, indeed, indispensable to the University as a place of learning.

Increased public interest in the fishery resources of Canada, as well as the need for a more complete specimen collection for students in fisheries biology, was recognized by both the Museum and the Department. The idea of a new, permanent gallery to fulfil these requirements was subsequently endorsed by the Museum's Board of Trustees and the Canadian Government.

The purpose of the gallery was to be twofold: first, to provide visual material that would be helpful to science students in their studies, and secondly, to portray for the general public the place of fish in the natural scheme of things and to illustrate the magnitude of the resource itself. In addition, through the use of scale models of typical Canadian fishing vessels, the gallery would illustrate the methods used for the capture of commercial species. It was felt appropriate that such a gallery should be located in the heart of one of the most densely populated sections of the country where it would be within reach of the greatest number of people. Every year half a million visitors go through the Museum, and of these 50,000 are students of elementary and secondary schools.

Work on the gallery, as a joint project, began in 1951 and after nearly two years of planning actual construction was started. Space allotted amounted to some 2,000 square feet in the north wing of the division of Zoology and Palaeontology. Under the joint arrangement it was agreed that the Museum and the Department would assume specific responsibilities — the Museum supplying all of the casts of fish and the artwork for the cases in which they would be housed, the Department supplying the cases, the models of fishing vessels, two sets of decorative murals in diagrammatic design, and an automatic slide projector for a section of the gallery to be used for the presentation

Another diorama depicting the herring-albacore marine group. Each of these habitat cases is eight feet wide, five feet deep and eleven feet high.

A rubber cast is freed from its plaster mould by members of the Museum's Division of Arts and Exhibits. The albacore from which the mould was made was shipped, frozen, from the west coast to the Museum.

A completed two-piece mould of a rainbow trout. Like all the fish casts, the one made from this mould was so exact that it was possible for scientists to tell the age of the model by counting the rings on the scales.

of subjects of current or seasonal interest.

Construction of the necessary components was carried out simultaneously. In Toronto, the Museum staff began the making of more than 100 new fish-casts to supplement those already available from the then existing exhibit of fishes, while in Ottawa the Department began the building of the cases.

The making of the casts was a long and painstaking undertaking and no effort was spared to make them the most accurate reproductions possible. Since every major group of fishes occurring in Canadian salt and fresh water was to be represented, with particular attention being paid to those of commercial, game or

Archie Reid, a museum artist, trims excess rubber from the albacore cast shown in the photograph above this one. It forms the focal point of the display shown on page 99 (preceding page).

Ottawa artists Gordon Fairbairn (standing) and Doug Baker consider a detail of one of the backgrounds for the models of fishing vessels.

biological interest, members of the Museum staff made numerous trips to both coasts and to many inland waters to make plaster moulds of fresh specimens and to obtain necessary colour notes, sketches and other data. The plaster moulds were shipped to Toronto where the final casts were produced.

The process of making the casts was developed by the Museum.* By clever use of plaster, celluloid, or liquid rubber it was possible to make bodies not only light and flexible but durable as well. These bodies were then coated with a pearl essence lacquer (made from the scales of herring) and finally given natural colouring by using artists' oil paints. The fins of the various fish, which are free from the bodies, were made of a rubber compound for certain species, and of plastics (such as celluloid acetate) for those fish whose fins are clear or translucent. The result, in every instance, was a lifelike reproduction of the original fish, correct even to the number of scales. So accurate are the casts, in fact, that only a trained eye can distinguish them from the actual specimen. The skill and artistry that went into this work have brought tribute to the Museum from many experts and laymen and have aroused much interest among museum designers in the United States and a number of European countries.

The over-all plan of the gallery called for the construction of thirty-five cases. These were

*For a detailed description see Report of the Director, Royal Ontario Museum of Zoology and Palaeontology, 1955, obtainable from the University of Toronto Press, Toronto.

A Museum artist paints in the shadows on a cod in the ground-fish group inside the habitat case as the display nears completion.

The diorama on which the artist is working in the photograph at the top of the page is shown here in its finished condition. The fishes are coloured to represent their appearance under water, not as they appear after they have been caught.

Dr. W. B. Scott (left), Curator of the museum's Division of Ichthyology, and T. M. Shortt, Chief of the Division of Art and Exhibits, discuss one of the casts.

WHAT IS A FISH ?
IT IS A VERTEBRATE
IT IS COLD-BLOODED
IT IS A GILL-BREATHER
MOST FISHES HAVE PAIRED FINS
MOST FISHES POSSESS SCALES
A FISH IS A COLD-BLOODED VERTEBRATE WHICH
BREATHES BY MEANS OF GILLS THROUGHOUT LIFE AND
USUALLY POSSESSES PAIRED FINS AND SCALES

The first of four introductory panels at the entrance to the gallery. The explanations are concise and clear.

made of rift-sliced Canadian oak, each separate and movable, but so accurately built that when in place they give the appearance of continuous construction. Simple in design, they serve their purpose admirably without competing with the displayed material. Because of the quality of the oak, and the craftsmanship that went into their construction, the cases were treated with oil and wax to bring out the natural beauty of the wood itself. For lighting, cold cathode tubing was chosen since it gave a uniform illumination and was found the most satisfactory in showing fish in their true colours.

In 1954 most of the cases were installed and the work of completing each one was undertaken. In early March of the following year the gallery was completed.

Special Features of the Exhibit

The visitor to the Gallery of Canadian Fishes is perhaps impressed first with the general attractiveness of the hall itself. Its smooth, graceful lines have a pleasing dignity which is accentuated by the beauty of the cases, the appearance of models, background artwork and design, as well as the skilful lighting (which succeeds in eliminating the distracting reflections so common in many display cases).

The entrance to the gallery features a special exhibit which explains that a fish is a cold-blooded, gill-breathing vertebrate. Most have paired fins, and most possess scales. The simple explanations are accompanied by small, exact models. This is followed by three other cases which show the variety of body form, colour, and external covering, as well as explaining the functions of fins, reproduction processes and development of fishes from eggs to adults. One of these panels deals specifically with scales and, among other things, shows how scales protect fish from injury and how they also may be used to determine age. The fourth panel contains a gross classification of living fishes, illustrated by models to suggest a "family tree". It is explained that probably all other vertebrates have evolved from now extinct relatives of the coelacanths and lung fishes, and three classes of present day fishes are illustrated: the *Marsipobranchi* (lampreys and hagfishes), the *Selachii* (sharks, et cetera), and *Pisces* (the majority

of the world's 30,000 species of fish).

Following the introductory panels is a series of cases displaying fish models in family groupings, and these also are accompanied by brief but clear explanations. The first of these, known in museum parlance as "systematics", shows sharks, gars and bowfins. Following this is a comprehensive exhibit of the salmon family, with models of cutthroat trout, brown trout, Atlantic and Pacific salmon, rainbow trout, lake trout, Dolly Varden, Arctic char and speckled trout. Immediately following the Salmonid group is another showing round whitefish, inconnu, Atlantic smelt, capelin, grayling and eulachon.

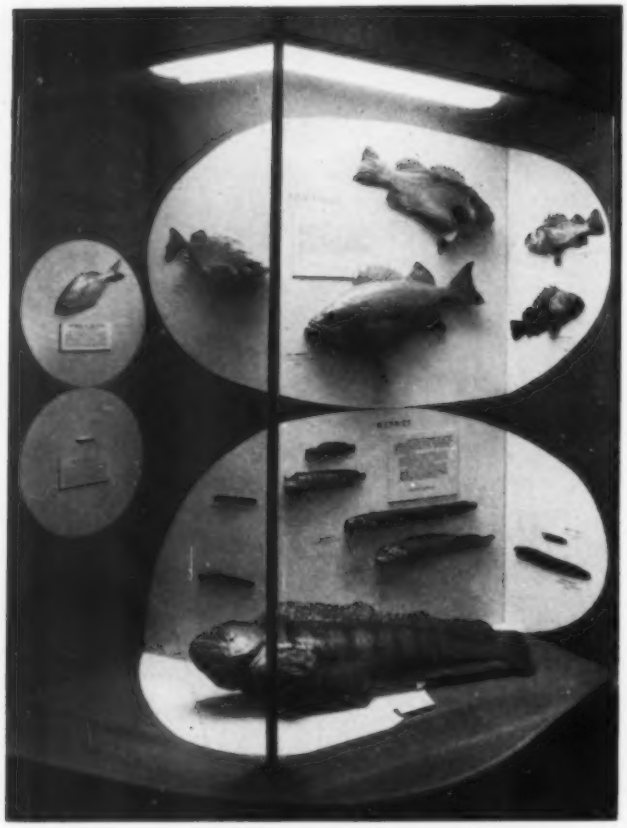
The Natural Habitat Settings

The series is broken here by the first of four large cases (8 feet wide, 11 feet high, and 5 feet from back to front) containing natural habitat settings of two groups of fresh water fishes and two groups of salt water fishes. These cases are three-dimensional in treatment, and the lighting, use of coloured filters and painted highlights and shadows provide a cool, realistic underwater effect, presenting the fish as they would appear in their own environment. The fish models in these habitat cases are held in suspended animation by cleverly hidden or camouflaged supports. Backgrounds are painted to represent underwater landscapes, and the foregrounds, representing the lake, river, or ocean, are built up of wire screening and papier maché, modelled and coloured to represent mud or rock bottom, either clear or rife with vegetation. An illusion of distance is provided by an exaggerated perspective.

The first natural habitat setting, or diorama, contains whitefish approaching and being caught in a gill-net. The descriptive wording is as follows: "Although hidden beneath the water, this scene is as typically Canadian as the grain elevator or the saw-mill. In thousands of cool, deep waters from the Great Lakes to Great Slave, the gill-net is the gear most widely used by commercial fishermen to capture the whitefish and the lake trout. The size of the mesh determines the size of the fish caught. The depicted net is designed to take legal-sized whitefish, which are shown ensnared in the

This panel outlines for the visitor the basic facts of the fish's existence.

The models used to show how the fish is adapted to its environment are small but exact.



The case, in museum parlance a "systematic," devoted to rock fishes and blennies.

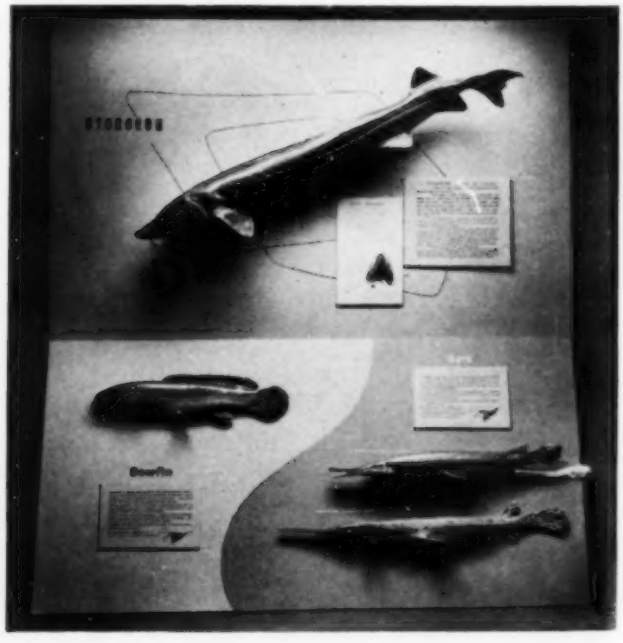
The herring-like fishes. Casts are accompanied by maps showing where each species is found.

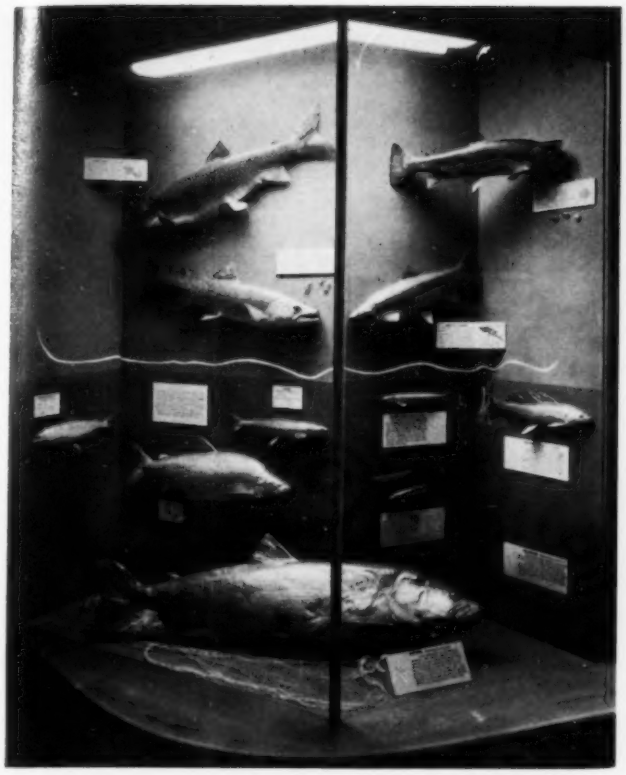
lower region of a gill-net. A school of smaller ciscoes passes easily through the upper reaches of the net. Attracted by the ciscoes, two lake trout sweep down in pursuit."

The next case is a family grouping devoted to herring-like fishes (shad, alewife or gaspereau, pilchard, herring, anchovy and gizzard shad), and the pikes (chain pickerel, northern pike and muskellunge). The models here are accompanied by maps, in which coloured sections

The suckers and the minnow family make up this attractive case.

Sturgeon, bowfin and gars, with details of their occurrence in Canada.





This group includes the lake trout, the Dolly Varden trout, whitefish, smelt, capelin, eulachon and the inconnu.

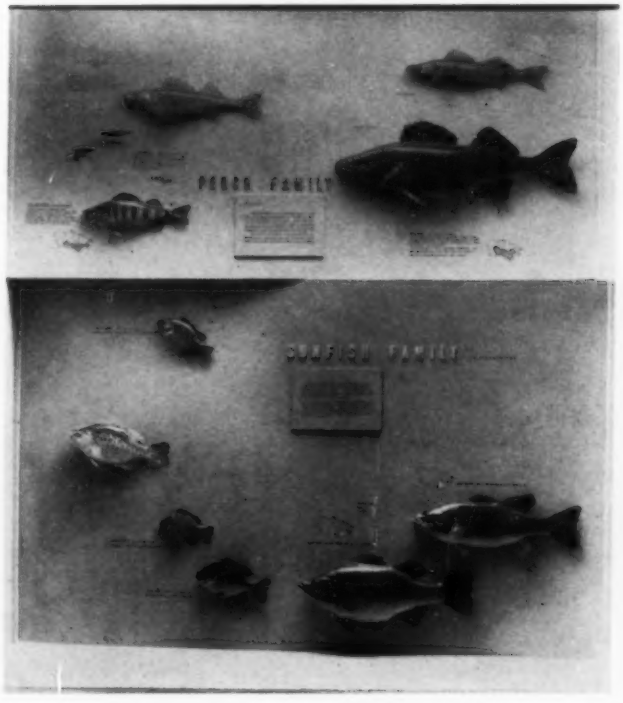
The sea perches, the mackerel, striped bass, sand launce, pomfret, freshwater drum and ronquil are in this case.

show the range of the fish illustrated.

Following this is a large case occupied by suckers and the minnow family. The former includes the quillback carpsucker, the longnose sucker, the northern redhorse, the white sucker and the hog sucker; the latter the carp, creek chub, Columbia River chub, Columbia River squawfish, common shiner, lake chub, emerald-shiner, longnose dace, spot tail shiner, pearl dace, red belly dace, fat head minnow, fine scale dace, golden shiner, Storer's chub and fallfish.

The visitor then comes to the case containing haddock, cod, Greenland cod, tomcod, pollack, hake, ling or burbot, and cusk. After that is an eel display, with enlarged models of larvae and the killifish, troutperch, pipefish, sea-horse and saury. The catfish exhibit shows the stone cat, brown bullhead, yellow bullhead and channel catfish.

The space devoted to the perch family shows sauger, logperch, rainbow darter, yellow perch, blue walleye, yellow walleye and walleye. The sunfish family includes rock bass, black crappie, pumpkinseed, bluegill, large-mouth black bass and small-mouth black bass. In the next panel are the freshwater drum, blue sea perch, shiner sea perch, silver sea perch, common mackerel, white bass, white perch, striped



The perch family includes the logperch, sauger, rainbow darter, yellow perch and the walleyes. In the sunfish family are the rock bass, large and small-mouth black bass, black crappie, pumpkinseed and bluegill.

bass, pomfret, cunner, sand launce and ronquil.

The second diorama, also devoted to fresh water fish, carries this description: "In the shallow waters, choked with a lush growth of aquatic plants, shafts of amber light dapple the weeds and muddy floor. A giant muskellunge, powerful of body and jaw, and partially hidden in the gloom, waits for an unwary creature to venture near. The setting of this group, an aquatic jungle, is typical of the shallows of many of our southern lakes; often the unfortunate objects of reclamation programmes, they are, in reality, essential and unique habitats — the dwelling places of a multitude of living things. This is the home of the large-mouth bass, the sunfish, perch and sucker and, within its limited range, the 'lunge, paragon of all game fishes."

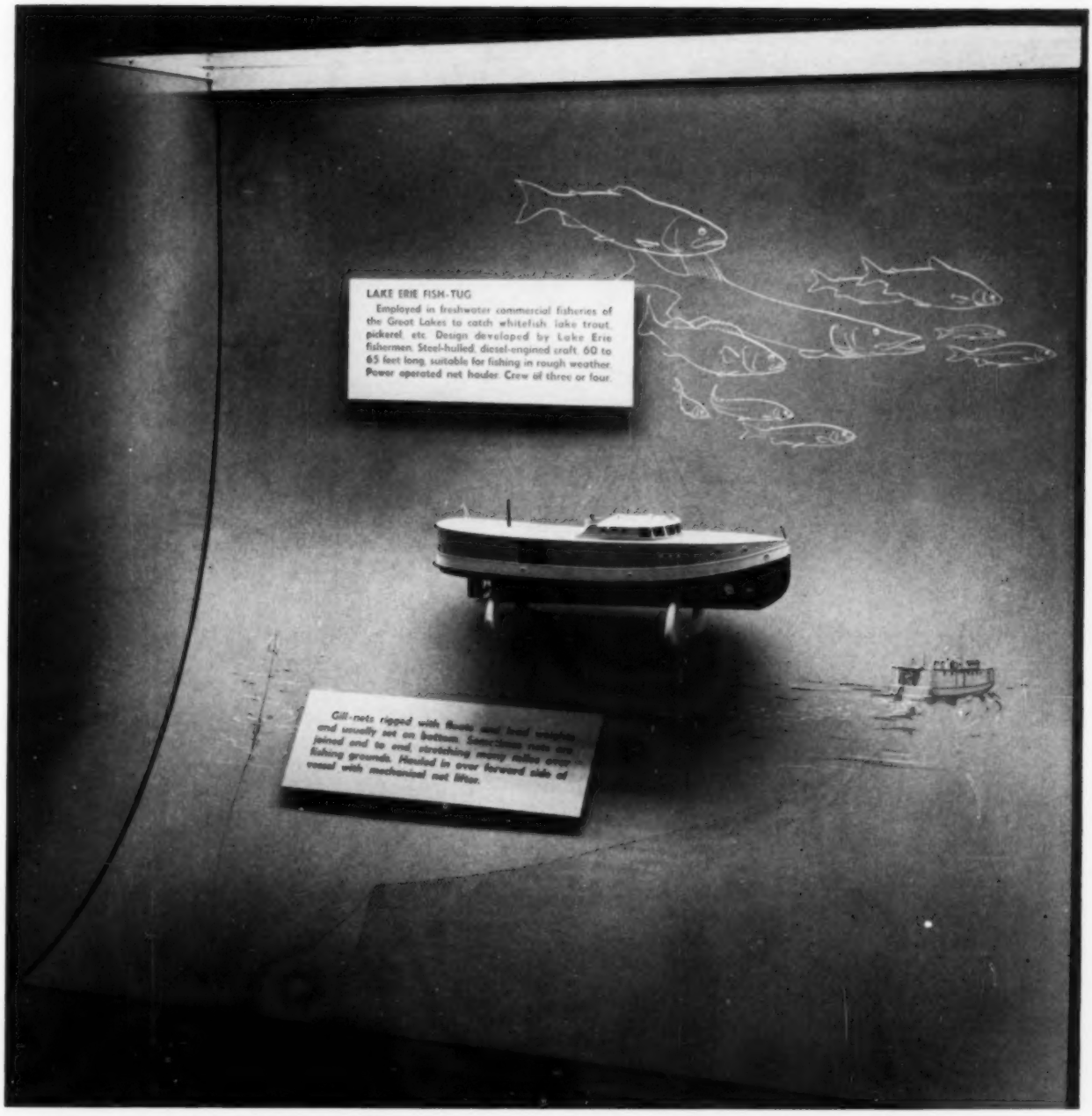
In the next few panels are a large number of small and medium-sized fish. These are the butterfish or dollar fish, brook silverside, rosefish, and the rockfishes (black, copper, orange spotted), the blennies (saddle, gunnel, radiated, decorated, wrymouth, eelpout, crested and black), wolf-fish, red Irish lord, sea raven, the sculpins (smooth, shorthorn, great, buffalo, longhorn, deepwater, slimy padded, tidepool, rough-backed, silver spot and giant marbled), the lingcod, greenling and kelp greenling, gruntfish, the flounders (witch, starry, rock, winter and smooth), halibut, windowpane, lemon sole, the midshipman, cling fish, lump fish, tube-snout, stickleback and sea poacher.

The Deep Sea Dioramas

The third diorama shows the habitat of the cod: "A world of incredible silence, its higher eminences bathed in a filmy, infinite blueness; a world of vague outlines and soft shadows, of murky caverns and sheer-walled canyons plunging into the blackness of the valleys of the ocean. This great submerged plateau — the Grand Banks of Newfoundland — is the home of the cod and the haddock. Minute plant and animal organisms (the sea's basic food supply) abound in its cold, shallow waters. Here is one of the great pastures of the oceans, producing an abundant yearly harvest of food fishes, and here the intrepid fishermen of Normandy, braving the stormy Atlantic, came to fish 150 years before the birth of Columbus."

A "systematic" devoted to the bizarre angler fish stands between the two deep sea dioramas. The fourth habitat case shows an albacore menacing a swarm of smaller fish: "In the vast expanse of the tractless, open ocean, without shelter and without a resting place, roam myriads of small, herring-like fishes. These are the forage, the living larder, for the rapacious and restless travellers — the prey of the large and powerful tunas and albacores. Here a mile-long school, numbering into the millions, streams by, its extremities lost to view, save for the flashing of iridescent scales. A dark form hurtles through the cool depths, a sudden turn, a flash and an albacore attacks a school of Pacific herring."

One of the decorative murals in the gallery. The subject matter is treated in simple outline of old gold on a dark red background. This one illustrates the fishing methods of Canadian aborigines.

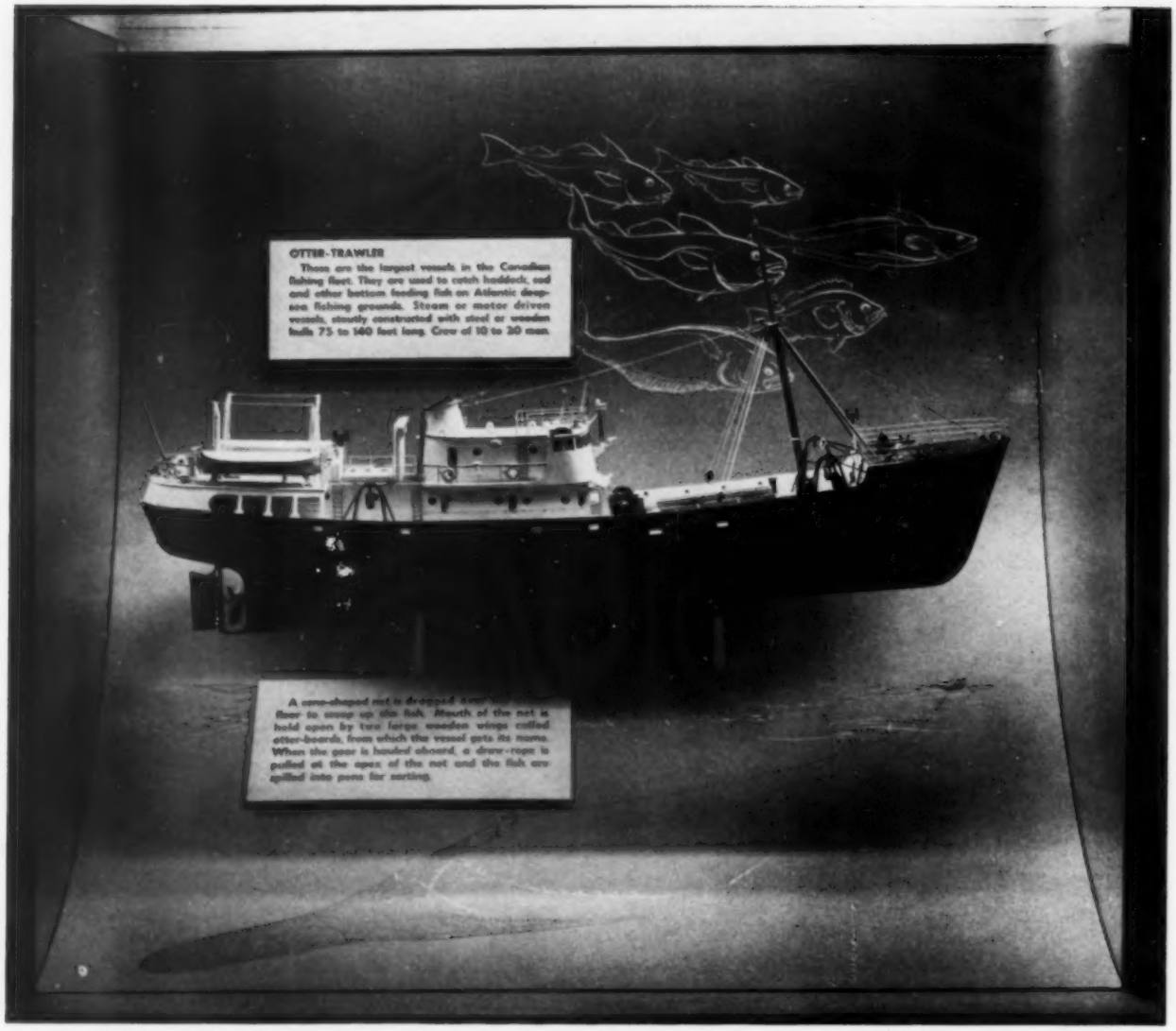

LAKE ERIE FISH-TUG
Employed in freshwater commercial fisheries of the Great Lakes to catch whitefish, lake trout, pickerel, etc. Design developed by Lake Erie fishermen. Steel-hulled, diesel-engined craft, 60 to 65 feet long, suitable for fishing in rough weather. Power operated net hauler. Crew of three or four.

The model of a Lake Erie fish-tug. The background against which it is mounted shows how the net is strung out behind the vessel.

All of the cases — the family groupings and the dioramas — are executed with skilful simplicity without sacrificing the thoroughness necessary to make each complete in its own field. They are, indeed, truly fine examples of the artists' abilities.

The Display of Model Ships

On the east side of the gallery, facing the specimen displays, are ten cases containing models of fishing vessels. These, built for the Department of Fisheries by a firm in England, are to a scale of one-quarter inch to the foot, and are examples of craft now in use on the Atlantic and Pacific coasts and inland waters. These models are superb examples of craftsmanship and are remarkable for their exact reproduction of detail. Each model is set out in full relief against a concave, pastel background on which an illustration of the vessel in action,

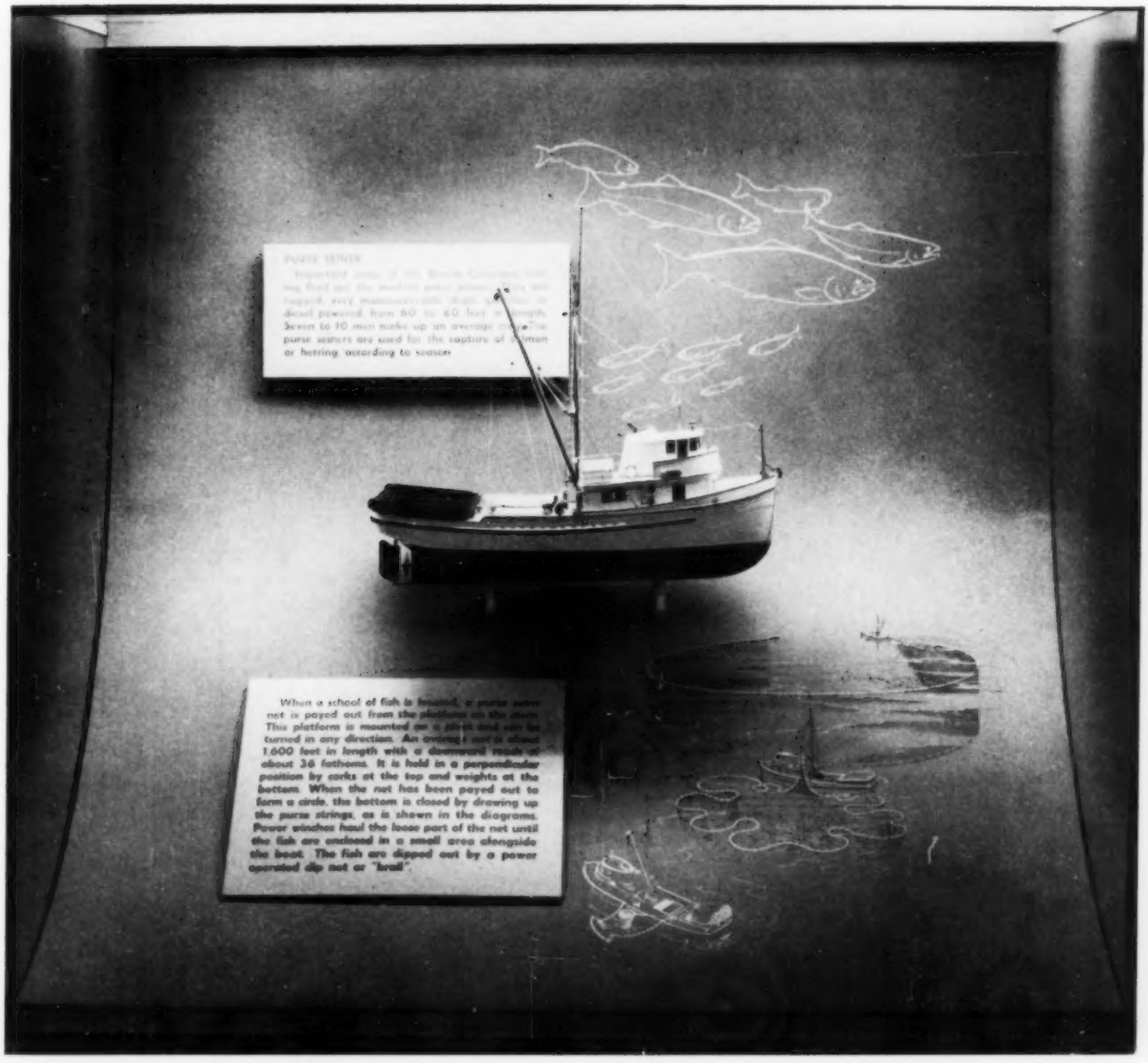

OTTER-TRAWLER
These are the largest vessels in the Canadian fishing fleet. They are used to catch haddock, cod and other bottom feeding fish on Atlantic deep-sea fishing grounds. Steam or motor driven vessels, steadily constructed with steel or wooden hulls 75 to 140 feet long. Crew of 10 to 20 men.

Every detail is perfect in this beautiful model of a deep sea otter-trawler. Like all the ship models, it is made to the specifications of the actual vessel.

along with its particular type of gear, has been delicately sketched. A brief description of the vessel and gear is given on separate cards contained in each case. The vessels shown are an otter-trawler, an inshore dragger, an Atlantic long-liner, a Lake Erie fish-tug, a Lake Winnipeg gill-netter, a British Columbia gill-netter, a Pacific troller, a Pacific halibut boat and a purse seiner. The last case contains a model of a federal Fisheries patrol boat.

Acting as an even division between the ship model cases is a ten-foot section containing an automatic slide projector and two special shadow boxes. This section is of special value to classes of students and to teachers, since it provides for the showing of coloured and descriptive slides dealing with various phases of the fisheries of current or seasonal interest. The shadow boxes are used for the display of specimens of fish under study.

One of the features of the gallery is a two-part mural, mounted over the cases housing the fishing vessels. These murals, done in modern, stylized form, treat the subject by the use of simple outlines of old gold on a dark red background. The first mural depicts the fishing


When a school of fish is located, a purse seine net is payed out from the platform on the stern. This platform is mounted on a pivot and can be turned in any direction. An average net is about 1,600 feet in length with a downward reach of about 36 fathoms. It is held in a perpendicular position by corks at the top and weights at the bottom. When the net has been payed out to form a circle, the bottom is closed by drawing up the purse strings, as is shown in the diagrams. Power winches haul the loose part of the net until the fish are enclosed in a small area alongside the boat. The fish are dipped out by a power operated dip net or "brail".

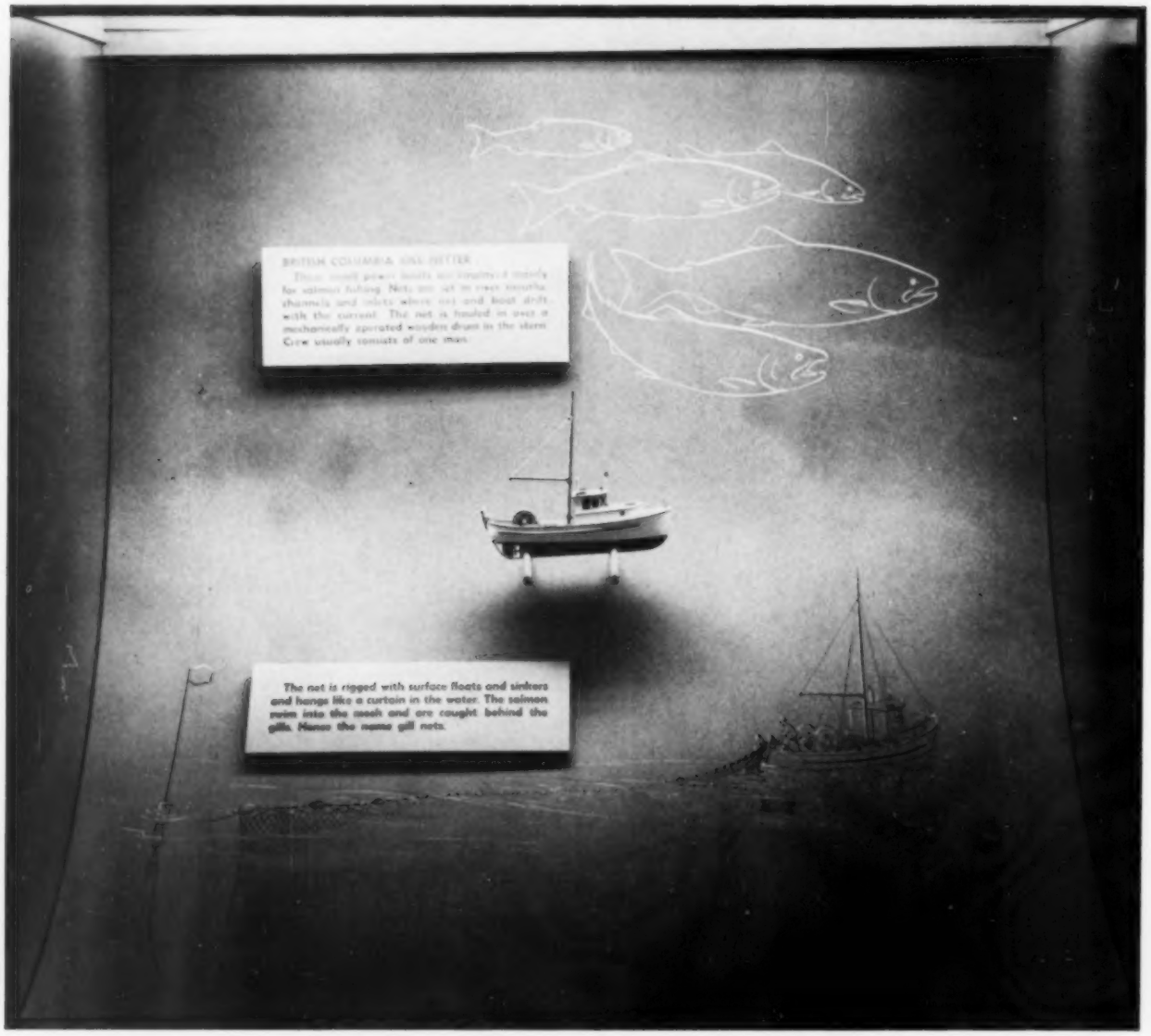
The purse-seiner is a familiar sight in every British Columbia harbour. Its manner of operating is clearly shown in this display.

methods of the east coast aborigines, with their spears, weirs and fire-drying; Eskimo ice-fishing with hook and line, and corralling and spearing. Then there are the western Indians who employed baskets, nets, spears, and rakes for the gathering of their harvest. The second part of the mural traces the growth and development of the Canadian fishing industry from its earliest days, when Europeans visited the Grand Banks before Canada was settled, to the present time when technical devices such as echo sounders, radar, and ship-to-shore telephone, loran, asdic and other devices aid the fishermen in making their catch.

Conclusion

The opening of the Gallery of Canadian Fishes, in March 1955 was one of the highlights of the Royal Ontario Museum's long and useful history. The federal Minister of Fisheries, Hon. James Sinclair, P.C., M.P., who was guest of honour on the occasion, paid warm tribute to all who had been associated with its construction. Mr. Sinclair was presented with a pair of especially inscribed scissors for the ribbon-cutting ceremony by Dr. Sidney E. Smith, President of the University of Toronto.

Canada is fortunate in her fishery resources, which are vast not only off both her Atlantic

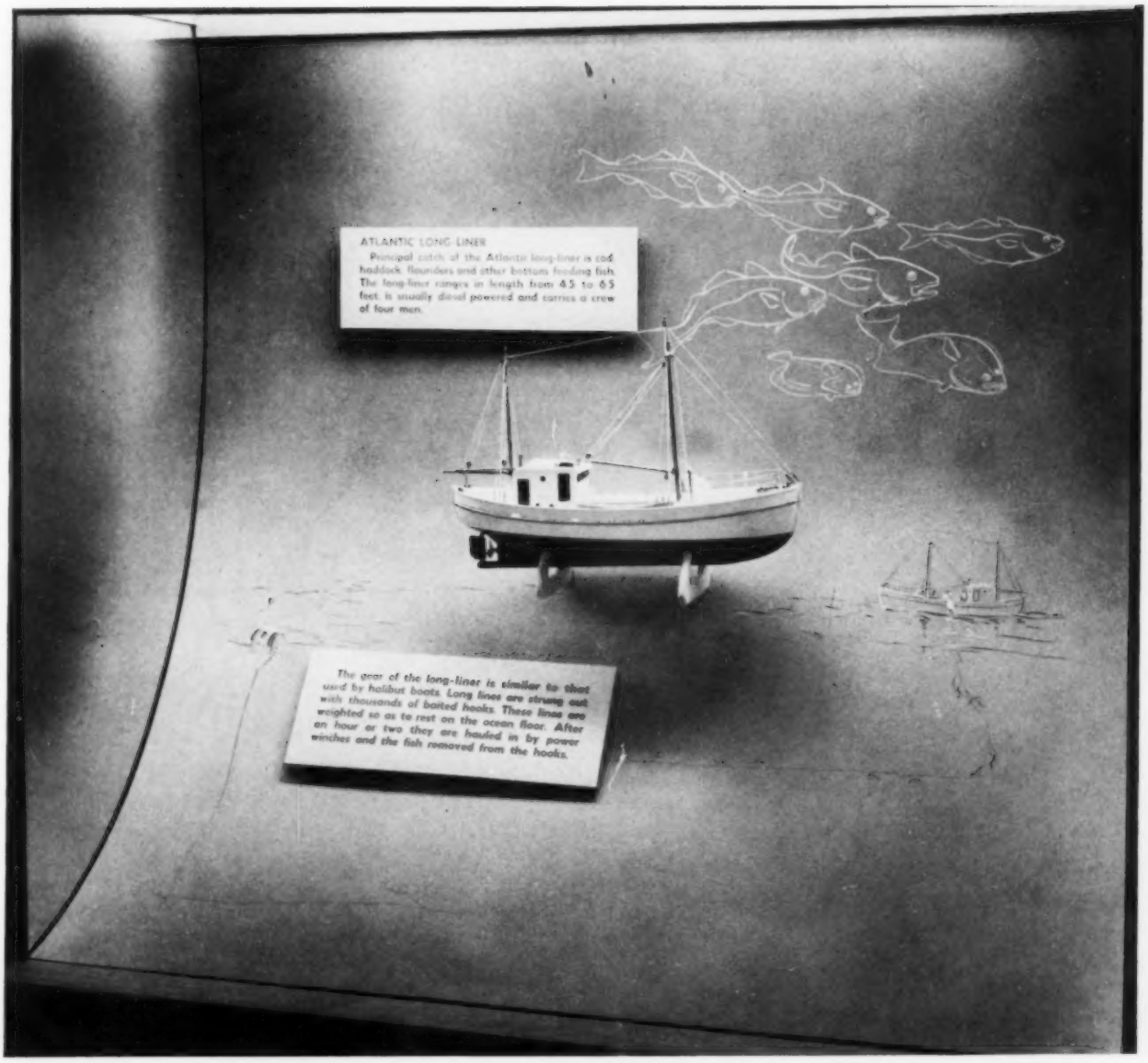

The net is rigged with surface floats and sinkers and hangs like a curtain in the water. The salmon swim into the mesh and are caught behind the gills. Hence the name gill nets.

The British Columbia gill-netter, used mostly in one-man operations. All the vessel models are built to scale, one-quarter of an inch to the foot.

and Pacific coasts but in her inland lakes and rivers. And the fishery resources of this country are not only of great commercial importance; the fisheries form part of her earliest history.

The fishermen of Canada, the marine scientists, the processors, transporters and sellers have built up a great industry on fish. Sports fishermen have studied their habits and habitats with some of the same fervour as the scientists. Countless books have been written about the various species. Interest in the inhabitants of the realm below the surface of the waters, what writers have called the "silent world", has never lagged. Wanderers along the beaches in search of shells or other specimens are soon made aware that here, in the tidepools and among the rocks, is one of the most prolific life zones in the world. Out to sea, and inland in the great bodies of fresh water, the fish move in their immutable cycles, a fascinating subject for study.

The quantities of fish in the sea appear limitless, but this is not by any means a proven fact. The stocks of some species have at times shown


ATLANTIC LONG-LINER
Principal catch of the Atlantic long-liner is cod, haddock, flounders and other bottom feeding fish. The long-liner ranges in length from 45 to 65 feet, is usually diesel powered and carries a crew of four men.
The gear of the long-liner is similar to that used by halibut boats. Long lines are strung out with thousands of baited hooks. These lines are weighted so as to rest on the ocean floor. After an hour or two they are hauled in by power winches and the fish removed from the hooks.

Model of an Atlantic long-liner. The shapes and characteristics of these vessels have arisen out of fishermen's experience over the years.

definite signs of depletion, and it has been demonstrated that wise management can restore them.

The sea's place in the scheme of life is so important that its resources must be guarded, not squandered as has been the fate of many forests and grasslands, as well as much wildlife. The ocean holds many mysteries, such as the lives of the Pacific and Atlantic salmons* once they are at sea, about which very little is known. However, in the case of the fisheries, one of the definite facts is that it is not yet too late to guarantee conservation. This cannot be achieved unless the countries of the world work together. Canada has played a pioneer role in this great objective. She is now signatory to seven international agreements designed to conserve both ocean and fresh water fish stocks.

Knowledge is the keystone of such work, and the Gallery of Canadian Fishes demonstrates what scope there is for those to whom the study of fish is either a profession or a rewarding hobby.

*See Canada's Pacific Salmon *by Roderick Haig-Brown, Canadian Geographical Journal, March 1952* and Canada's Atlantic Salmon *by F. H. Wooding, Canadian Geographical Journal, October 1954.*

Models of British Columbia fishing vessels made from designs by Robert Allan, B.Sc., Naval Architect, Vancouver.

One of the larger kettles on the beach at Kettle Point, Lake Huron.

Why "Kettle" Point?

by DOUGLAS LEECHMAN

ABOUT twenty-five miles northeast of Sarnia, in the southern bay of Lake Huron lies Kettle Point, once known as Cape Ipperwash. The Point itself is on an Indian reservation and is visited annually by hundreds if not thousands of tourists, attracted by the pleasant waters of the lake and the beautiful scenery of this part of Ontario. For many years Kettle Point has been well known to geologists and collectors of minerals because of the occurrence here of more or less spherical concretions, locally known as "kettles" because of their resemblance to the large cast-iron kettles our grandmothers used for doing the laundry or making soap in. The concretions range in size from two or three inches to three or more feet in diameter. Though usually round they are sometimes a little flattened, generally on the under side, and occasionally there is a smaller one implanted in the top of a larger one.

They are not difficult to break open, and are then seen to be made up of a mass of long slender crystals, radiating in all directions from a somewhat confused centre. Analysis has shown the crystals to be carbonate of lime (calcite), and the soft core sometimes contains a little yellowish sulphite of zinc. It may be the presence of this mineral that led to the false

idea that there is gold at the core of these concretions and people have broken many of them open, quite in vain and with much needless destruction.

The concretions are embedded in a black shale which splits readily into thin layers and, as the shale weathers away under the action of the waves and the winter frosts, fresh concretions are continuously being exposed. Taking them away or breaking them open is prohibited now, a little late really, for they once covered the rocky shore in thousands and nearly everybody for miles around had a collection. The only ones left are those that are too big to carry.

These great stone balls have long been known to the Indians, of course, and they have no difficulty in accounting for them. Many years ago, we are told, the Good Manitou was walking along the shore of Lake Huron when he was set upon by a troop of giants. Having no weapons with him, the Manitou quickly created these convenient missiles and defended himself with them. Having put the enemy to flight, he continued his walk and, naturally enough, didn't bother to pick up his ammunition again before he went on.

The interior of a broken kettle, showing the crystalline structure.

Photographs by the author.

The nearer of these two kettles is lying on its side, showing the base where it has broken from the shale.

Handicrafts under the Midday Moon

by ADELAIDE LEITCH

Photographs by the author

BUSY fingers get to work when Yellowknife is frozen fast to the northern shore of Great Slave Lake, and it is a lazy lady indeed who has not at least three or four handicrafts at the tips of her fingers when the midday moon climbs up into the wintry Northwest Territories skies.

Winter is a busy season in the north, and northerners tend not to hibernate even so much as they do farther south. They cancel hockey and other outdoor sports only when the mercury dips down to more than 40° below zero in Yellowknife, but the colder it gets, the busier are the home-bound women. This youthful town of youthful people, about 250 miles south of the Arctic Circle, has one

A collection of the handicrafts of Yellowknife. Shown are examples of copper tooling, including boxes and a wall plaque framed in polished wood, dough flowers, framed flower plaques, and a small experimental rug.

of the liveliest handicraft groups in Canada.

The women turn out copper tooling as mellow as satin, hand-painted textiles, personalized Christmas wrappings, woven drapes, toys, watercolour and oil paintings, articles from the loom, the crochet needle and the leathercraft tools. They make dough flowers that look like bits of Dresden china, slip covers and upholstery for their homes and — the latest addition — Oriental rugs. Block printing started out in a modest way with the making of Christmas cards, graduated to textile painting, gathered more and more enthusiasts, and now is one of the most popular of the Yellowknife handicrafts.

Ever since it got under way officially in 1946 as a far-northern branch of the Canadian Handicrafts Guild, the Yellowknife branch has had its handicraft classes filled to overflowing, and members have been looking eagerly around for other crafts to add to their repertoire. Every newcomer to town is eagerly questioned on available skills — and induced to share them, preferably in a new handicraft class meeting once a week.

Like every other business in the Northwest Territories, supplies are the big problem, and the raw materials for a whole winter's work have to be brought in at once; it is no novelty for the executive to order three hundred dollars worth of supplies at a time.

In the Hudson's Bay Company's big, modern store in the new town, a show case displays the local work, and the best of it is usually bought right back into other local homes. Sales climb delightfully around Christmas, as holiday shoppers dispatch local gifts to the outside.

Technically, the Yellowknife group is a purely local affair for the town itself, with representatives from the Old Town built on the low peninsula jutting out into Yellowknife Bay, from the New Town on the hill, and from the two big producing mines, 'Con' and 'Giant'.

An enthusiastic member of the local group, Mrs. Daphne Borden, traces a design on a piece of copper. Many Yellowknifers prefer the warm shading of copper to aluminum for their work.

Mrs. Audrey Rivet specializes in block printing and textile painting, but she finds relaxation and a new phase of craftwork in making her own Christmas wrappings. Linoleum blocks are used for the larger designs and greetings; small decorations can be printed from corks.

Birch-bark is used by present day Indians of Yellowknife in their crafts and sewing baskets, such as the one on the right, are finished as neatly inside as out. The small copper pot, left, is one of the original ones given by the Hudson's Bay Company to the northern Indians and now eagerly sought.

Actually, the guild takes in one of the largest fields of operations in Canada, because it now stretches up to the shores of the Western Arctic and takes a maternal interest in the Eskimos at work on their own handicrafts on even longer winter nights.

Canadians, for some time, have been able to buy the Eskimo soapstone work from the Eastern Arctic that is channelled through Montreal; it is only recently that the lovely and more primitive work of the Western Arctic has begun to come through Yellowknife. The carvings of slatey-black Eskimos pursuing their seal hunts, waging private battle with each other, doing their fishing through the ice or their snoozing in front of an igloo seldom find their way beyond Yellowknife because the townspeople themselves, most of them newcomers and raised on the 'outside', find these native crafts vastly intriguing. Some are sent outside as Christmas gifts, but many more are kept right in town and are prized conversation pieces.

It was not until the spring of 1953 that the Coppermine market opened up at all and the Western Arctic soapstone began to come south. Ernie Boffa, crack northern bush pilot, flew the first pieces out and then went to the president of the local handicraft branch, petite, energetic 'Didi' Woolgar. By the beginning of July, between $500 and $600 worth of soapstone had come out of the Arctic and been sold through Mrs. Woolgar and the local women, and the Eskimos on the shores of Coronation Gulf had more money to put in their parkas!

Local merchants — and the guild — blushed becomingly the day they discovered that Yellowknife was also selling *Eastern* Arctic soapstone in local shops, dutifully if mistakenly shipped up to Yellowknife via Montreal, Toronto and Edmonton. The soapstone of the two areas of the Canadian Arctic is quite easily identified. The work from the Eastern Arctic is usually more colourful, often coming in shades of lighter greens and greys and the carving is frequently more detailed and more tailored to the standards of the southern Canadians who will buy it. The more sombre Western Arctic work from Coppermine and Coronation Gulf is a sooty black; the workman-

ship is simpler, more primitive and, in the minds of those who buy it, often lovelier.

On a more local front, the Yellowknife handicraft group also encourages the Indians of the Northwest Territories to develop their own skills and crafts. In the summer of 1953, it provided a working fund of $100 to help the Indian women, with the co-operation of the Department of Indian Affairs.

With a town population of 2,800 men, women and children, the membership in the Yellowknife handicrafts branch now stands at a satisfying 100 to 120 actual paid-up members, plus an extra-curricular group who take handicraft courses without being included in the business sessions. Self-governing and self-operating, the Yellowknife group runs its own affairs quite independently of the Canadian Handicrafts Guild of which it is a member. Along with the provincial branches in Alberta, Manitoba, New Brunswick, Ontario, and Quebec, the Northwest Territories sends in an annual report and financial statement to headquarters but, otherwise, it is strictly 'on its own'.

Once they began, handicrafts caught on like wildfire in Yellowknife. Original organizer was Ruth Stanton, wife of Dr. Oliver Stanton of 'Con' Mine. An expert in handicrafts herself, and a qualified teacher of weaving, she gradually gathered others into the teaching staff, some qualified, some enthusiastic amateurs, and all eager to help anyone who wanted to learn.

Courses begin as the lovely, long summer days begin to fade, and they run from September to April, usually with four classes to each craft, sometimes with more for more intricate ones like sewing. Nine general meetings are held a year, omitting the two mid-summer months when everyone lives out of doors, and the ultra-busy Christmas month.

Once a year, in September, the handicrafts of the Northwest Territories go to the Fair (along with the best samples of home cooking, home-made bread, cookies and garden produce). From then on, the very long northern nights begin to edge out the very long northern days, and the Yellowknifers begin to look around for new handicrafts to learn or to teach.

With, as she says, "only a hundred or so" paintings of northern wild flowers, Mrs. Didi Woolgar thinks she has only begun to catalogue them. With subjects right at her doorstep, she finds, like many in Yellowknife, that painting makes an excellent summer as well as winter hobby.

Indian work is encouraged in Yellowknife by the local branch of the Canadian Handicrafts Guild which, in 1953, gave a grant to assist in the work. Here, Mrs. Boniface Alfonse puts the finishing touches to a white caribou jacket, embroidering the flowers in many-coloured silks.

From the fields below, the old town of Norma may be seen high on the slopes of the Lepini Mountains.

The Pontine Fields

by GEORGE KISH

Photographs and map by the author

THE TRAVELLER WHO, southbound from Rome to Naples, follows the winding stretch of the Appian Way along the steep slopes of the Alban Hills finds on arriving at the ancient town of Velletri an entirely new and unexpected sight. Instead of the landscape of hills covered with scrub, or with vineyards clinging to their sides, and towns and villages hidden in the foliage of ancient oaks and chestnuts, a wide and cultivated plain lies in front of him, stretching to the horizon — the Pontine Marshes, now, more aptly, called the Pontine Fields.

Here, within the last twenty-five years an experiment has taken place that deserves to be called one of Europe's most spectacular ventures in the field of land reclamation and resettlement. The marsh, forest and bog that once covered the plain have largely disappeared, replaced by fields and meadows. In the spring the landscape is a symphony of greens: light green of grain fields, silver green of olive groves, darker green of meadows, and, far off on the horizon, the last remnants of the ancient forest, clothing the area around Mount Circeo. The dark blue of the sea to the west and the

light grey of the talus on the Lepini and Ausonian Mountains to the east frame this panorama. Little does the casual observer suspect what a profound transformation has taken place there between 1930 and the present time.

The Pontine Marshes occupy an area of about 300 square miles, forming an irregular oblong that is limited in the north by the Alban Hills, in the east by the Lepini and Ausonian Mountains, in the west and south by the Tyrrhenian Sea. The name Pontine goes back to the time when Rome was a tiny state on the Tiber, and a group of Volscian cities occupied this area, Suessa Pometia, according to tradition, being the most important among these. Pometia in time became Pontine, but there is no discernible connection between that name and Pontus, the term the Romans used to describe north-eastern Anatolia. At the time of the Roman conquest around 382 B.C. the city of Suessa Pometia was still standing, as was Anxur, a Greek settlement on the site of present-day Terracina on the southern edge of the Pontine Marshes.

One feature only remains within the area to remind one of ancient Rome: the Appian Way, first of the great Roman highways that tied the empire together, the road that ran from Rome south and south-east and crossed the Pontine region. The cause for the decline of the region appears to have been a combination of political and economic factors: the ravages of the civil wars of the last republican century, and the increasing reliance of Rome on overseas territories for wheat, that deprived the Pontine region of its principal means of livelihood[1]. It is interesting to note that one of the main objectives of the revival, reclamation, and resettlement of the region in modern times was to provide additional wheat for Italy.

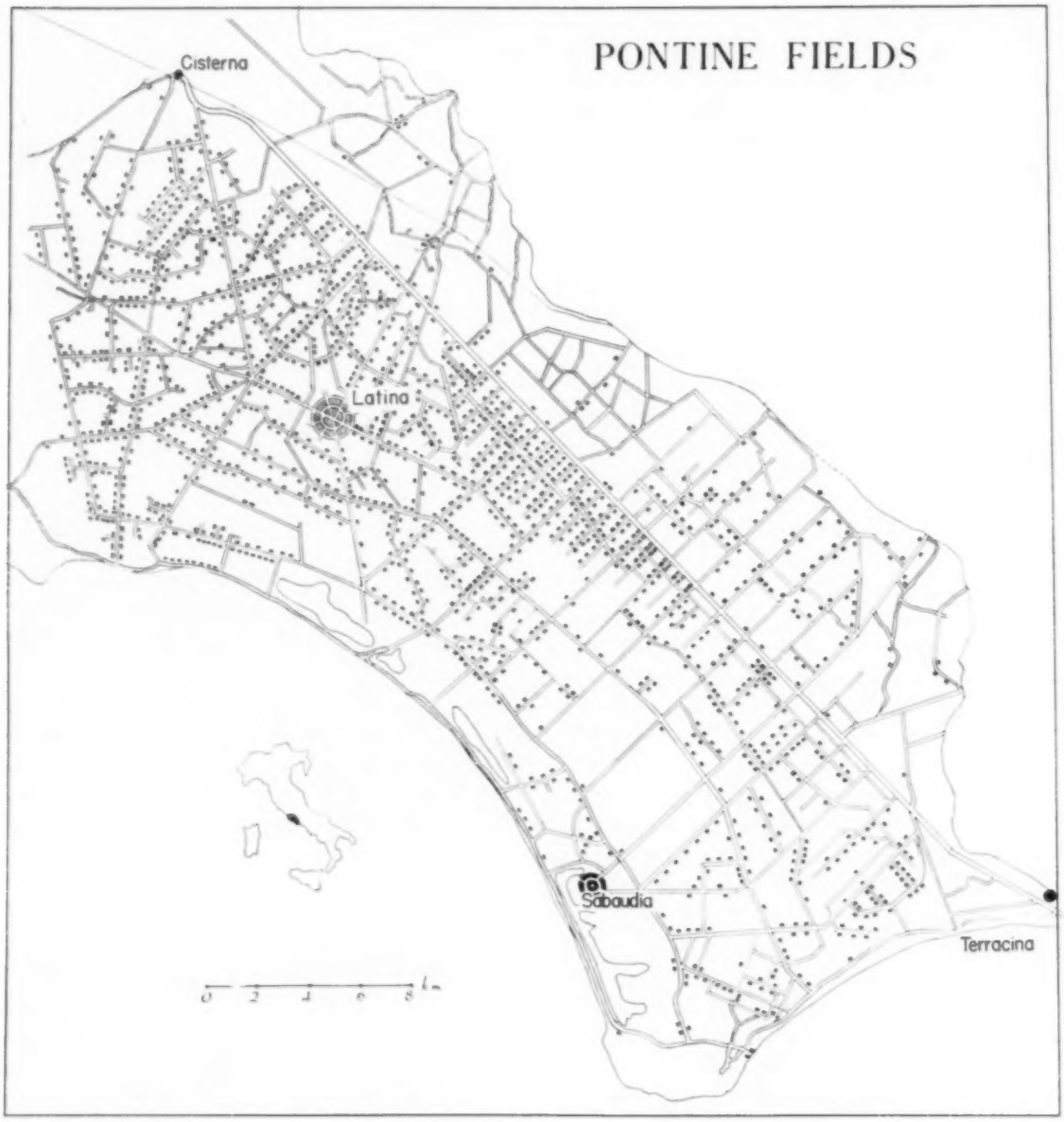
By the first century of the Christian era the decline had run its course: malarial swamps had replaced the fields of wheat, the cities had been abandoned and the extension of the swamps and meandering of the streams had made travel on the great Appian Way extremely difficult. By A.D. 70 the Romans were travelling across the Marshes by boat, and the ancient cities were slowly crumbling and disappearing, as builders carried away stone and marble from them to other, newer settlements.

For fifteen hundred years kings, popes, and local lords tried again and again to reclaim the land. The list begins with Theodoric the Great, king of the Goths, and runs on down to the last pope to rule over the lands of the church. The best that could be achieved was to bring back into cultivation a few thousand of the nearly 200,000 acres of the Marshes — land lying on higher ground below the foothills of the Lepini Mountains. There the last great experiment conducted by the Papal State under Pope Pius VI during the eighteenth century stopped.

The landscape of the Pontine Marshes as it appeared at the close of the nineteenth century was composed of three vegetation types. Scrub occupied the greatest area. Arbutus, myrtle, thorn, laurel, and other trees and shrubs spread in profusion over much of the northern and central parts of the region. In the southern part, especially in the area surrounding Monte Circeo, the great landmark that alone interrupts the flat monotony of the horizon of the Marshes, a forest of ilex, umbrella pine, elm, poplar, and chestnut, with heavy undergrowth, was most characteristic. This was teeming with wildlife; in fact, wild pigs were hunted there until a few years ago.

The city hall and main square of Latina, provincial capital of the Pontine area.

1 cf. KOPPEN, Dorothea: *Der Agro Pontino Romano-Eine moderne Kulturlandschaft.* Schriften d. geog. Inst. Univ. Kiel, vol. XI., No. 2, 1941.



In the north-western and western portions, near the shores of the Tyrrhenian Sea, where drainage was particularly poor, swamp vegetation filled in the land and stagnant waters provided an ideal environment for the malarial mosquito. The only permanent habitations consisted of isolated buildings strung along the Appian Way, where the road-menders dwelt; elsewhere huts of reed provided shelter for the charcoal burners and for the shepherds who descended into the Marshes during the winter with their flocks. Malaria was the principal obstacle to any permanent settlement; as recently as 1924 the guide-books warned visitors never to linger abroad after sunset, when the mosquitoes set forth in search of victims.

Surrounding the Marshes, a string of towns looked down from their rocky eminence upon these fever-stricken purlieus; from Velletri to Terracina, these towns perched on the slopes of the Lepini and Ausonian Mountains. Down in the Marshes, a few Roman aristocrats had

transformed a couple of isolated half-ruined hamlets into hunting and winter resorts for themselves and their friends.

Beginning towards the end of the last century, private individuals and corporate entities, these latter mostly the towns on the Lepini and Ausonian Mountains, became engaged in the task of reclaiming the wilderness that was the Pontine Marshes. The area thus reclaimed was situated in the northern and north-western portions of the Marshes. Prince Caetani was particularly active in the group of individual landowners. Under his direction some 3,700 acres, the last remnant of what was once a vast family estate in this region, were reclaimed and brought under cultivation.[2] Other reclaimed areas were equally successful from an agricultural point of view; but the menace of malaria remained, and because of it farmers were reluctant to settle on the Pontine Marshes in any numbers.

This was the state of the Pontine Marshes when the Italian government passed legislation enabling it to begin "integral reclamation" there, in 1928. The Fascists decided to invest the necessary sums in this work with the objects of cultivating the land and augmenting the domestic supply of wheat, and creating a showplace of Fascist accomplishment on the doorstep of Rome.

Reclamation of the Pontine Marshes started in 1930 and was virtually completed in 1939. Because the vast array of earth-moving machinery now used in such work was not available, World War I ammunition and explosives were used to turn the earth literally upside-down. New canals were dug to drain the low areas; new roads were built, and the framework of settlement was laid out. To make settlement possible, malaria was brought under control by draining off stagnant water, by spraying coastal lagoons and water courses in the interior, and by constant public health measures among all workers engaged in the project.

The Italian Government planned, financed and supervised the undertaking. In 1932 the *Opera Nazionale Combattenti*, the Veterans' Administration, a governmental agency organized in 1919 with the specific task of resettling veterans of World War I, was given full authority over the entire area of the Pontine Marshes. Later, in 1934, when territory north-west of the Marshes was added to that already controlled by O.N.C., it became the largest Italian agency in the field of reclamation and resettlement. It retained control over the entire project until the Italian armistice of 1943.

The pattern of settlement and land use that emerged after the task was completed was totally different from the one that prevailed earlier in the region. To the observer who travels across the Pontine Fields today after having become acquainted with the countryside of southern Italy, the change is startling. It is evident both in tangible and intangible ways. Instead of the clustered, closely packed villages and towns of the traditional south, there are individual farms; the sharegrowers, one finds, are replaced by owner-farmers; there is a general air of relative prosperity about the farmsteads; children are not on the streets during school days; and there is a notable absence of beggars throughout the entire region. Other changes are equally striking, chief among them being the presence of dialects not spoken anywhere else in southern Italy, dialects of the north.

The present-day landscape of the Pontine Fields is the result largely of planning by the Veterans' Administration. When it was given charge of the Pontine project in 1932, the depression was well under way, and unemploy-

2 Vöchting, Friedrich: *Das pontinische Siedelwerk;* Weltwirtsch. Archiv, vol. 56, 1942; reference on pp. 394.

Ninfa, a town abandoned in the sixteenth century because of its malarial surroundings, is now the country home of a wealthy Roman aristocrat.

The main canal of the Pontine Fields, looking south-west towards the Tyrrhenian Sea.

ment was widespread. Thus, to the original motives of increasing domestic production of wheat and building a monument to the regime, there were added the new ones of providing employment for thousands of workers, and creating farms for the veterans of the strongly Fascist north.

A pumping station on the Linea Pia canal on the Appian Way.

It is a matter of record that 90 per cent of the settlers who came to the Pontine region between 1932 and 1934 were from the Venetian region. Even though during the years 1936-1939 several hundred new farms were taken up by families from the neighbouring areas of Lazio, as late as 1939 the proportion of northern farmers in the Pontine Fields exceeded 50 per cent.[3]

The predominance of northern settlers made creation of the new pattern of dispersed family farms a great deal easier, since this type of settlement was very well known in the north. In view of the presence of a minority of southern farmers, however, and in order to provide for the social, medical, educational, and commercial needs of the settlers, villages and towns were also established in the region.

Nine villages or township centres (*borghi rurali*) were designed and built, each named after one of the battles of World War I. These function as local meeting places: each one is provided with a school, a doctor's or pharmacist's office, a church, and a "salt and tobacco" shop. In these centres the farmers find company on holidays, go to worship, and send their children to school.

Before the reclamation work began the only sizable communities were the towns strung along the hill-tops at the edge of the Marshes. Four cities were planned and built on the plain between 1932 and 1939: Latina, the capital of the new province which is known as Littoria; Sabaudia, on the seashore; Pontinia; and Aprilia. The last of these and the most recently inaugurated one, Aprilia, lies outside the Pontine Marshes in the north-western extension of the settlement area assigned to O.N.C. These were designed as urban centres; they satisfy the commercial, administrative, judiciary, and cultural needs of the population. They are the shopping centres; there the weekly fairs are held, there the farmers go to court or to consult a lawyer or a notary; and there they pay their taxes, buy their implements or have them repaired.

The changes in land utilization that can be observed in the Pontine Fields are just as radical as those that have taken place in the settlement pattern. The division of the newly

3 Vöchting, op. cit., pp. 428-429.

Part of Latina, as seen from the tower of the city hall. Latina is the largest city in the Pontine area. Dominating the surrounding buildings in the middle distance is St. Mark's Cathedral.

reclaimed land into individual farms was deliberately encouraged by the planners to demonstrate the superior efficiency of the individual, and the farms were widely dispersed, unlike the traditional nucleated settlements of the south. There is little doubt on the point of efficiency: the farmer living on the land he cultivates spends very little time getting to and from his fields, while in the old villages and towns in which most southern Italian farmers live it is not unusual for a farmer to spend from four to six hours a day commuting to and from the land he works.

When the resettlement work of O.N.C. was completed in 1939-40, there were nearly 3,000 farmsteads in the Pontine Fields, the bulk of the farms (71 per cent) ranging from 25 to 75 acres.[4] Each farmstead had a house, one of fourteen types designed by O.N.C.; an outside

4 Vöchting, op. cit., pp. 395.

By 1953 Latina had grown considerably. Darkened areas indicate the built-up blocks.

A clean, spacious seaside city—Sabaudia. It is on a lagoon beside the Tyrrhenian Sea.

oven for baking bread; a well; and a few outbuildings for implements and livestock.

The principal crops now raised include sugar beets, grapes, and vegetables, as well as wheat and corn. Dairying is important, the milk and other dairy products being shipped to the neighbouring Rome markets.

The farmers who were installed in new houses in the Pontine Fields and who started their work with a substantial government loan brought the region to life. The effect of their work on the land is evident in the new fields and new crops; the results of careful planning, in the new settlements. What seems more difficult to assess is the present character of this island of northern Italy in the midst of the traditional southern Italian countryside, and the change in everyday life that has resulted from regional planning in an old cultural area.

The alteration in forms of speech is one of the easiest changes to observe. The dialects of the Venetian region and Emilia are still spoken by the majority of people in the Pontine Fields, while the communities on the hills use only the dialect of Lazio, common to the region of Rome. There has been a slow but steady migration of the hill folk down into the plains. A subtle process of adjustment and assimilation has taken place between the people of the hills and plains, between the old ways and the new, and enough contacts have been established to smooth over the difficulties that occurred at first.

While the changes in the rhythm of daily life and activity are harder to measure, none the less the difference between towns such as Latina and Sabaudia and the old, well-established settlements of the mountains and the interior valleys are quite evident. There is a faster-moving life, more bustling, less lingering in the cafés perhaps, in these towns of the Pontine Fields than in settlements of comparative size in the interior of Lazio.

Another change is that occurring in religious symbolism. The cathedral in Latina, the largest city and episcopal see of the region, was not dedicated to any of the numerous and popular saints of central Italy, but to St. Mark the Evangelist, the patron saint of Venice and of the entire Venetian region!

The dress of both men and women in the countryside around Rome is mainly black. Not so in the Pontine region, where colours play a far more important role, and black is used only in "Sunday best." The prevalence of bicycles is another striking feature of this region, significant because bicycles are considered a sign of considerable affluence by most central and south Italian farmers. This latter observation was borne out not only by comparing the Pontine Fields with other districts of Lazio, but by noticing that one of the important features of the land reform program in the Fucino Basin, sixty odd miles east of the Pontine region, was the sale of bicycles to the farmers by the land reform agency on a three-year instalment plan.

The high cost of the Pontine experiment has convinced some Italian authorities that it was far too expensive a way to solve the Italian agricultural problem. It is estimated that the total cost of the Pontine project amounted to one billion lire by 1939, equivalent to 65 billion lire today, or about $105,000,000. When the cost of the project is related to individual farms, it is found that it cost the Italian government 1,450,000 lire a hectare (about $970 an acre) to reclaim the land in the Pontine Fields, and 26 million lire (about $41,500) to resettle a single farm family on the newly won land.

Yet the project was built on a sound foundation, on the overwhelming desire of the Italian peasant to work land of his own. Even though much of the Pontine region was devastated by war in 1944 following the Anzio landings and the Allied drive towards Rome, most of the damage has now been repaired. Important changes took place during the post-war reconstruction period: family farms, created on land that proved to be too poor to cultivate, were abandoned; some of the larger farm holdings were subdivided; and large-scale irrigation facilities were established. Today the Pontine project is once more a going concern, and, judging by field interviews, a prosperous one.

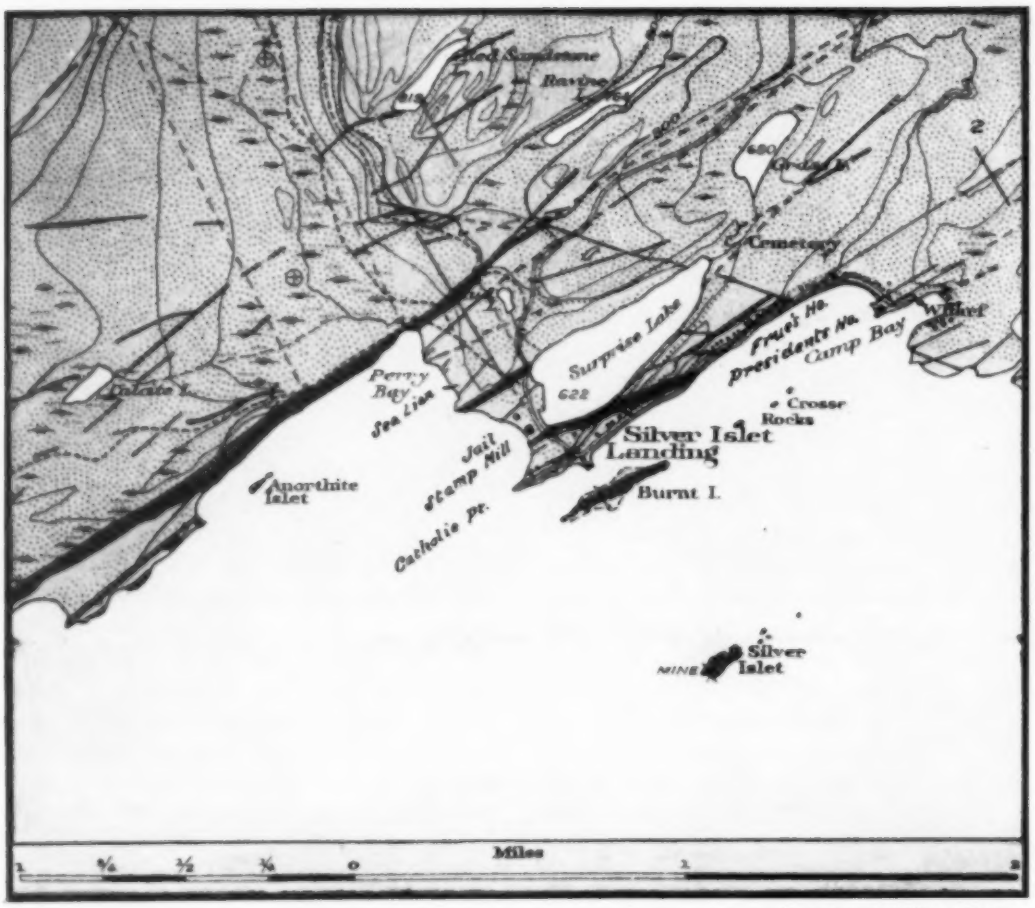
What appears to the writer far more important than the results obtained by the Pontine experiment is the experiment itself and its methods, the fact that this turned out to have been a pilot project for all Italy in terms of rural resettlement, reclamation, and rehabilitation. The Pontine Fields were the training ground of agronomists, social workers, town and village planners, architects, and hydraulic engineers, who are now engaged in urban and rural reconstruction throughout the country.

The very types of settlement developed in the Pontine area, the *borghi rurali*, are now serving as models for similar developments in the Po delta, in the coastal section of the Maremma region, in Tuscany and Lazio, in Puglia, and in Lucania. As a pioneer venture, the Pontine experiment appears to have served its purpose well, and it has made a major contribution to the great task of rebuilding central and southern Italy.

Field investigations in preparing this article were carried on with the help of a Fulbright Research Fellowship. The author wishes to express his sincere appreciation to Howard R. Cottam and Eric B. Shearer of the United States Foreign Service and to Professor Manlio Rossi-Doria (Naples-Portici) for their valuable assistance and counsel.

Borgo Vodice, one of the smaller settlements in the Pontine Fields. These rural centres function as meeting places for the farmers. Each has a school, church, doctor's or pharmacist's office, and a "salt and tobacco" shop. The church and a group of dwellings are seen here.

Dispersed family farms have proved more efficient than the traditional nucleal farm settlements of the south. This is one of the new farmhouses for individual families in the north-western part of the Pontine Fields. One of the outbuildings is seen on the right.



Department of Mines, Ottawa.

Silver Islet Landing

by BERYL H. SCOTT

Photographs courtesy of the author

ONE AFTERNOON near the end of August we filled our car with passengers and took a run out to Silver Islet Landing or, as it is known locally, Silver Island. The only male member of our party was the Man at the Wheel, and the only person not a lakehead citizen was the lady from Chicago.

Silver Island, by the way, is not an island at all, but a strip of rocky coast along the north shore of Lake Superior about twenty-five miles east of the lakehead cities of Fort William and Port Arthur, Ontario. Almost a mile off shore lies a tiny islet; this is the real Silver Islet, the site of the once famous Silver Islet Mine.

Silver Island, while it is a summer camping spot, is not a summer resort in the accepted sense of the word. Herein lies its charm. Silver Island is a quiet retreat, a haven from such modern annoyances as telephones, electricity, and other allied conveniences. It is inhabited by a colony from the lakehead cities whose parents, or grandparents, had bought the homes built originally for the employees of the Ontario Mineral Lands Company, and abandoned when the Silver Islet Mine closed down.

The day we chose for our drive was sunny with just a nip in the air. As we drove along the Nipigon Highway, signs of approaching fall greeted us from all sides. Leaves of birch trees were taking on a lighter hue, mountain ash were loaded with bunches of scarlet, and dogwood blushed darkly beneath waxy white berries.

Here and there, through the trees to our right, we glimpsed the Sleeping Giant and, farther along, the lovely Caribou Island.

Turning on to Pass Lake-Silver Island Road, the beginning of which skirts the northern end

This is how Silver Islet looked about 1908 before the mine was reopened by a Duluth firm. Years earlier the upper part of the breakwater had been washed away, leaving the shore exposed.

of Thunder Bay, we approached the Danish village of Pass Lake. High quartzite cliffs rose abruptly on our left and immediately to our right lay Pass Lake itself. We passed a small family group catching bass as they fished from the edge of the road.

Next came the Danish settlement, with its tidy, prosperous looking little farms. After that we found ourselves in the Provincial Park and Game Preserve which includes nearly all the lower Sibley Peninsula. Here the rust-coloured, winding road made a pleasant contrast to the spruce, pine and cedar through which we were passing.

Nearing the Island, we stopped at the little jail which had been built over eighty years ago. Good judgment had been used in choosing the site for this building whose chief duty was to cool off the over-indulgent. It was situated far beyond the main part of the village, its builders little dreaming that, when a road was to be built down Sibley Peninsula, the jail would be the first relic of the old mine to receive visitors.

From there we walked down to the Sea Lion, a diabase dike extending almost at right angles into Lake Superior. The lean, fractured sides of this gigantic creature are almost as smooth as if they had been cast in a mould, which in truth they were — ages ago.

As we came back to the car, our guest's attention was drawn to Surprise Lake.

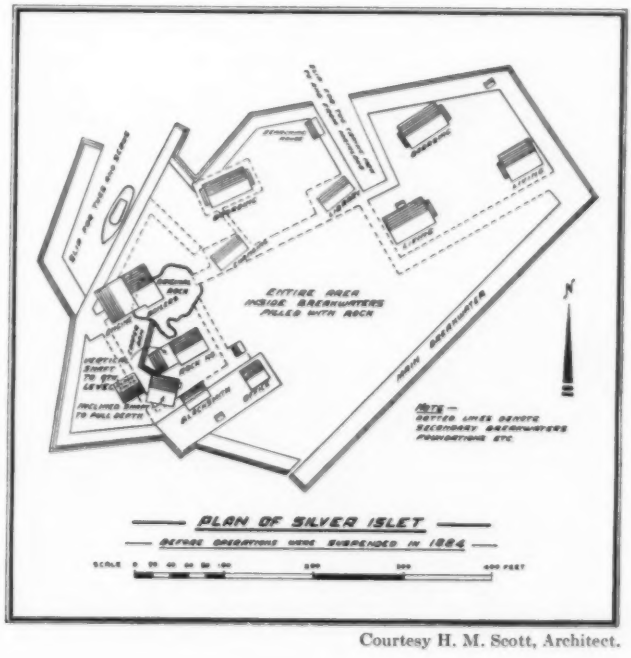
"But what's the surprise?" she asked.

"Perhaps there's something odd about it," someone suggested. Presently she gave a little squeal of delight.

"The water levels! Why, Surprise is away higher than Superior," she chuckled.

"Twenty feet higher," said the Man at the Wheel.

We drove over to the store, parked, and walked across to the sign which gives a brief


ENTIRE AREA INSIDE BREAKWATERS FILLED WITH ROCK
MAIN BREAKWATER
N
PLAN OF SILVER ISLET
BEFORE OPERATIONS WERE SUSPENDED IN 1884

Courtesy H. M. Scott, Architect.

history of the mine. Then we went down to the new government wharf.

Gone was the old wharf building where, long long ago, interested persons could sit on the big, square timbers and wait for the supply boat going to and coming from the Islet; where years later, when water-travel was still the only means of reaching the Island in the summertime, campers would sit on those same timbers and wait for the excursion steamers from the lakehead cities.

Forty years ago, a favourite method of spending a public holiday was to get up early, pack a lunch basket, round up the family, rush down to the city dock, scramble aboard the paddle-steamer *Forest City* — and relax. While crossing Thunder Bay most of the passengers made a point of being out on deck. It was part of the joy of the trip just to sit and gaze at the cool, blue-green waters of Superior and, drawing near Thunder Cape, to watch the Sleeping Giant gradually fall apart and become nothing more than a series of diabase mesas.

As the steamer neared the Cape, seasoned passengers leaned on the port rail and concentrated on Thunder Cape lighthouse where the heels of the Giant should have rested, while others, susceptible to rolling seas, discreetly withdrew to the privacy of the lower deck.

East of the Cape, the *Forest City* followed the route once taken by voyageurs of old when they plied their heavily laden freight canoes between Montreal and Fort Kaministikwia — afterwards Fort William. Years later, explorers in canoes, and then in sailing vessels, followed this same route in search of copper.

We passed Catholic Point on our left, entered the channel dividing Burnt Island from the mainland, and then drew in to the wharf where campers, with nothing better to do, were awaiting the excursion boat. It was quite evident that our self-appointed reception committee was mainly composed of teenagers, the girls wearing long, heavy skirts, big hats, and daring little blouses that exposed bare arms from elbows to wrists.

Of course, if the day had turned stormy the wharf would be deserted except for Captain Cross, the kindly old wharf master who was always on the job.

Silver Island and Captain Cross are as inseparable as Silver Islet and the mine. For fifty years after the mine closed down he and some of the members of his family continued to live out at the Island and, in spite of apparent isolation, life was never dull.

If the new wharf brought back memories, the interior of the original store profoundly stirred the imagination. To all appearances it is the same today as when Cornish miners came clumping in for their plugs of tobacco, and their wives spent the rest of the weekly wage of fourteen dollars on kerosene, flour, sugar, dried prunes, cheese, and calico.

Really, to get into the spirit of Silver Island one must walk the Avenue. This is a narrow, stony road that runs close to the lake. Across the road, facing the lake, the cottages are built in a row, at levels best suited to the rocks on

This is a view from an excursion steamer, taken in 1908 as she approached Catholic Point en route to Silver Islet Landing. On the extreme right is the wharf building, on the far left, the stamp mill.

which they stand. At one spot, so little space is left for the roadway that several cottages back up against a sheer cliff. The campers deserve praise for preserving the atmosphere of the old village. Although they have added roofing, paint and sunporches, and new cottages have been built, nothing has been overdone.

Halfway down the Avenue the lady from Chicago asked, "Where is the mine?" Momentarily it had been forgotten. There it was, nearly a mile out in the lake, the visible part lying like a raft on the surface of the water.

It wasn't much to look at; buildings gone and straggly trees trying to sustain themselves on damp mine waste. But if it had not been for the mine, this road and this enchanting spot called Silver Islet Landing would have no reason for existence.

It all started in the summer of 1868 when Mr. Thomas Macfarlane and a party of explorers commissioned by the Montreal Mining Company arrived on the north shore of Lake Superior, twenty-five miles (as the crow flies) east of Fort William and Port Arthur. During the course of their work one of the men went a mile out from shore to plant a stake on a tiny, rocky islet not more than eighty feet in diameter.

At the time, the rock was described as looking like a giant skull emerging from the water, but the exciting part of the skull was an exposed vein running across its crown and down into the lake. The discovery of this vein, immensely rich in native silver, was the beginning of the famous Silver Islet Mine.

In the fall, when the party went back east they took with them $1,200 worth of specimens shaken loose by a single blast of powder and pried from the vein with crowbars. The opportunity to make a fortune appeared to be there for the taking, but before Silver Islet could be made into a producing mine a fortune would have to be spent on preliminaries alone. The Montreal Mining Company had been bitten once in a copper mining venture and in this they were twice shy.

Little was done for two years, then the property was taken over by American interests and a stubborn, dynamic man named Frue arrived

The mine in operation about 1876. On the left are the original shaft and rock house.

Looking west, view of the business district about 1876. Wharf and dock are on far left.

to superintend the task of turning the tiny skull rock into an El Dorado.

Right from the start the project was a heartbreaking one. Storms lashed the islet. Breakwaters were built only to be washed away, but the challenge hurled at him by Lake Superior merely strengthened Mr. Frue's determination to complete his task.

That he won out to his own and his company's satisfaction is now a matter of history. The tiny islet was greatly enlarged by breakwaters of heavy timber cribbing and thousands of tons of rock from the mainland. This area accommodated buildings necessary to operate the mine.

Along with all the activity on the islet, a sizable village was springing up along the shore of the mainland. The business section lay to the west of the Avenue. This included a stamp mill for treating lower grade ore, a general store, customs house, school, dwellings, and two churches. The focal point of activity was the wharf. Then came the Avenue, like a long thin neck, joining the body of the village to an exclusive residential section where officials of the mine built their homes.

Between this one-time exclusive spot and the rest of the village there flows a little brook (officially Sibley Creek) spanned by a wooden bridge. Instead of crossing this, we turned and followed a trail to a quiet spot high on a sandy bank — the old cemetery.

In recent years only one grave has been added. It is that of a man who, finding the Island a haven of rest, desired to remain there always. He could not have found a better spot for it is the essence of peace. The little brook, hidden somewhere at the foot of the sandy bank, sings its way softly toward the greatest of lakes while above his grave evergreens shed their perfume with every passing breeze.

Geologists have found an abundance of interest in Silver Islet Mine and many enlightening reports have been written regarding its structure and history. In appreciation, it is acknowledged that the E. D. Ingall's *1887 Report*, Archibald Blue's *1896 Report*, Dr. T. L. Tanton's *Memoir 167*, published 1931, and *Mining in Ontario* by Thomas Gibson, 1937 were used in writing the historical part of this article.

Perhaps, more than anything else the story of the mine is the story of the grim conflict between man and the elements. Mr. Frue won the first round when he earned fame and fortune in building the breakwaters which protected the islet. However, wily old Superior was lying waiting, and she could afford to wait. In the winter of 1873-4 she struck another blow. Ice hurled by mountainous seas acted like a battering ram, shearing off the upper part of the main breakwater. This disastrous storm cost the company $11,000, and it was only one of many.

Superior found another way of harassing the intruders who insisted on removing her wealth. "A large feeder of water broke into the bottom of the mine, which at once drove the miners from their work, the water rising about ten feet an hour."[1] This water seepage became an ever-present problem that kept the pumps working twenty-four hours a day, pumping 155 gallons a minute.

In addition to these troubles, a combustible gas was encountered. "This gas . . . is accompanied by water containing calcium chloride in solution."[2] When this solution touched the workers' skin the effect was extreme irritation.

The historic sign at the store says the mine produced over $3,500,000 during its short life. The bulk of this came from two bonanzas.

The first was worked out by 1874, after producing $2,000,000 in silver. During 1875 Mr. Frue and Silver Islet parted company, but the fight continued under Mr. Trethewey, an underground man who had been with the mine from its beginning.

In 1878 the second bonanza was struck, and one of the mine officials has described it as follows: "This deposit was phenomenal in its structure and a winze in the middle of the deposit to the 4th level, sixty feet, was sunk literally through native silver, the metal standing out boldly from the four walls of the winze."[3] (A winze is a shaft sunk from one level to another, usually for ventilation.) When this second bonanza was struck the mining

1 Thomas Gibson, Mining in Ontario, p. 50.

2 E. D. Ingall, 1887 Report.

3 Ibid.

company's finances were in a shaky condition. However, "this deposit paid off the bonded indebtedness, leaving a surplus of $300,000".

The winter of 1883-4 was a distressing one. Down 1,230 feet, the mine had just about petered out and, while it had produced generously, it had no reserves to fall back on.

In January, 1884 Mr. Trethewey wrote to the head office in New York City: "Ere long we shall find ourselves placed in a serious dilemma owing to the non-arrival of our winter supply of coal last fall — a vessel with a cargo of nearly 1,000 tons of coal having failed to reach here, being laid up en route. The present supply of coal is sufficient to run with until about March 1st, after which we shall find it extremely difficult to carry on the work."[4] This letter tolled the death knell of the mine, and in the spring of 1884 its active life was suspended.

For thirty-six years the mine lay abandoned, but interest was never lost. In 1920, it seemed as if the spirit of Mr. Frue became restless and beckoned across the years. A Duluth firm took an option on Silver Islet, pumped the shaft to the fourth level and, under the most trying conditions, carried out a great deal of exploratory work at a cost of $84,000. The gross value of ore recovered was only $10,971.97. Once again, on August 15th, 1922 Lake Superior took possession of the mine and, very likely, this was for all time.

After crossing over Sibley Creek, we walked along Crescent Beach. Before it burnt to the ground, Mr. Frue's old home had faced this beach. Farther on, we entered the still tidy grounds where Mr. Alexander Sibley (the president of the mine) had built his twenty-five room summer home. This, too, went up in smoke many years ago.

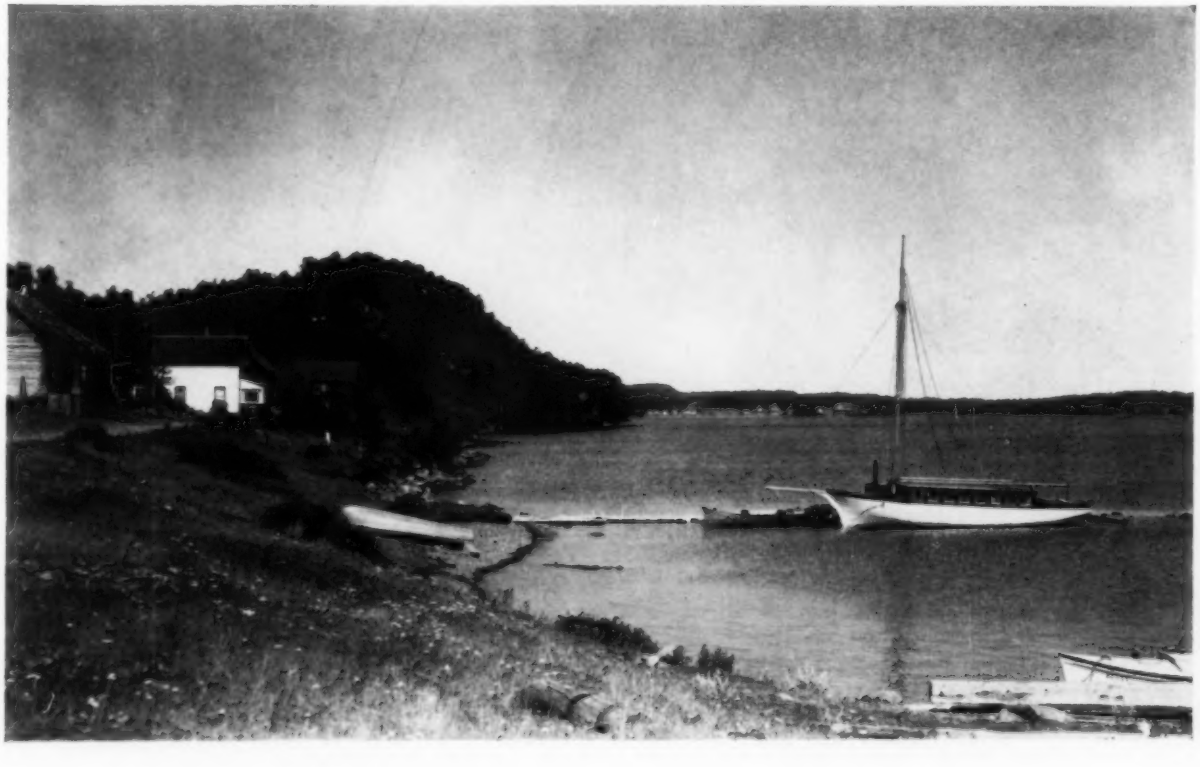
Sitting on the diabase dike that borders the estate we could see a small Finnish settlement tucked away at the farther end of Camp Bay, quite apart from the summer colony. These people were commercial fishermen.

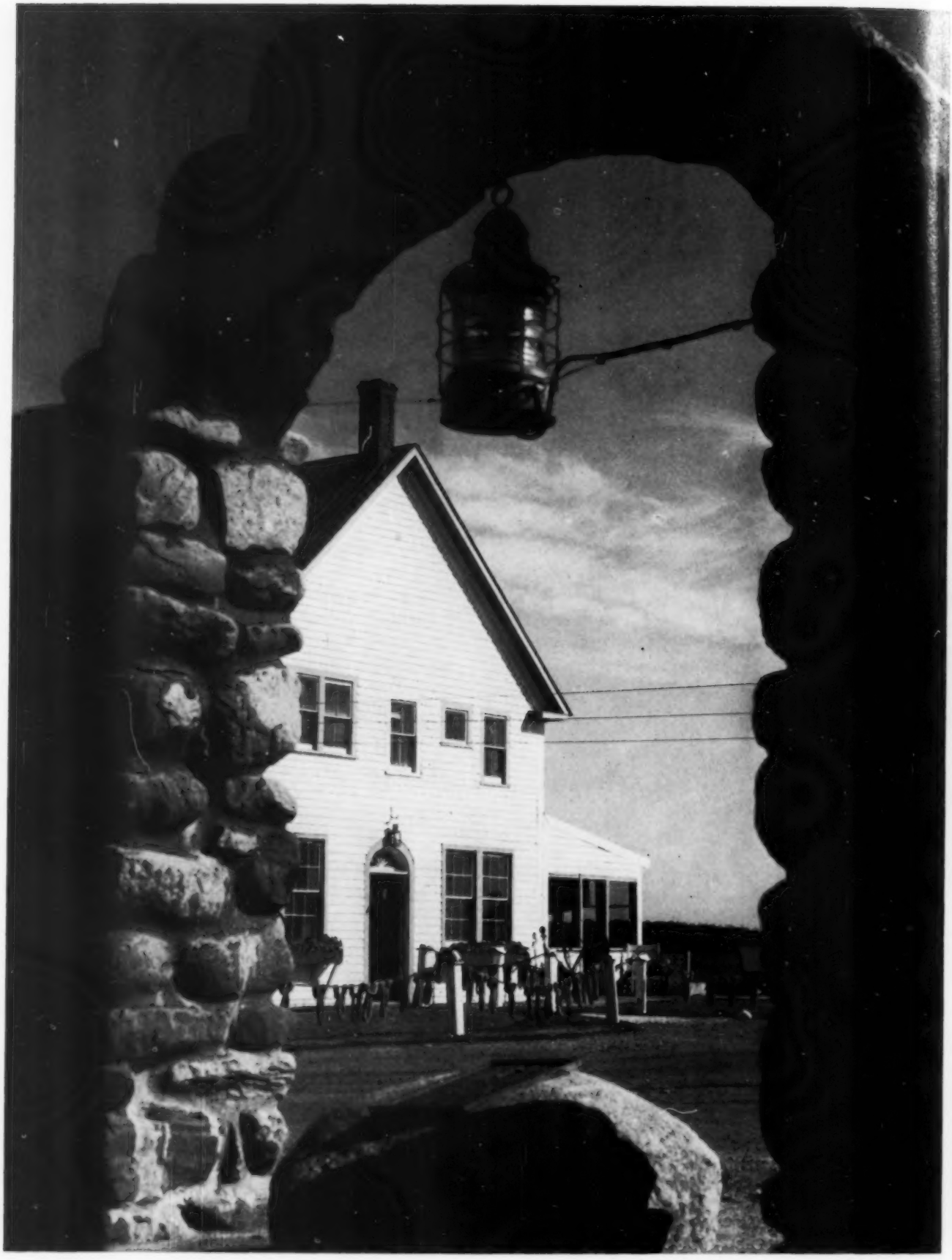
"The campers at Silver Island are lucky," our guest said. "I shudder to think of what some fishermen could have done to that picturesque corner."

We had our picnic on the diabase dike. Afterwards we lingered. And why not? Old Silver Islet had cast her spell on us, as she never fails to do to those who know her story.

[4] Ibid.

Looking east from the dock toward the Avenue about 1930. In the distance is Crescent Beach and at the end of it, showing between the mast and forestay of the cruiser, is the president's house.





Pictures of the Provinces—X

The stone arch of the war memorial at St. Andrews, New Brunswick, frames the headquarters building of Charlotte County Cottage Craft. On the fence hang skeins of yarn. The province's hand-knit and hand-woven products are favourites of tourists. St. Andrews, situated on Passamaquoddy Bay at the mouth of the St. Croix River, has a fine harbour and is a very popular summer resort. It was founded in 1783. C.P.R.

A bronze statue of Longfellow's Acadian heroine Evangeline *gazes wistfully across the marshlands surrounding Grand Pré Memorial Park in Nova Scotia. Not far away a metal plaque marks the place where the Acadians boarded ship for exile in October 1755. Even then there were fine orchards and farms in the area, for Grand Pré lies near Windsor at the head of the fertile, sheltered, Annapolis Valley. In the background stands a replica of the Church of St. Charles which was attended by the Acadian settlers. Part of the building is used as a chapel, part as a museum for Acadian relics.* C.P.R.

THE TRAVEL CORNER

Luccombe in Somerset. Nearby is Dunkery Beacon, the highest point in Somerset, which commands a view over Bristol Channel and countryside of outstanding beauty. U.K.I.O.

Leisure and the Great Outdoors of the United Kingdom

Somebody recently made the rather startling statement that three times as much travel was being done now as was done before the Second World War. He went on to say that this was merely the beginning, in effect that the travel industry was still in its infancy.

Undoubtedly it is true that the people who earn their livings today have more time in which to travel than their forefathers had. The working week has been shortened to five days, and vacations have been extended to two, three and four weeks.

Not only do we have more leisure for travel now; but also more inducements. Highways and automobiles are being improved constantly. Transcontinental and international transportation facilities are increasing in number, and competition is resulting in better accommodation and service. As if this were not enough, a fierce and unremitting pressure is exerted upon us by promoters and advertisers to travel here and there, see this and that, and buy just about everything.

In the face of such pressure it is amusing to observe the stubborn persistent gravitation of city people towards the country in their leisure hours. In Canada, for example, on every summer weekend the roads out of the larger centres are clogged with traffic moving determinedly toward the hills and lakes. Indeed, the rush to the wilderness is not restricted to the summer months: it goes on all year round, for the harsh northern winter is turned to advantage by skiers, skaters, snow-shoers, and sleigh-riders.

Evidently realizing that this urge to rediscover nature was both serious and significant, the British Government in 1949 passed the National Parks and Access to Countryside Act, which guarantees every citizen freedom of access to the countryside. This piece of legislation was the outcome of a half century's struggle by the Ramblers' Association of 48 Park Road, Baker Street, London. The main objective of the organization, as its name indicates, is to encourage and assist rambling. Its many services are available to visitors from abroad, as well as national members. At the request of those planning walking tours, for instance, it will lend maps, plan routes, and provide a list of 3,000 rest houses.

This is but one of the organizations dedicated to helping the person who wishes to travel on foot or by bicycle and live simply in order to see as much as possible of Great Britain. There are numerous others, such as the Youth Hostels Association, the Cyclists' Touring Club, the Camping Club of Great Britain and Ireland, the Mountaineering Association, and the Speleological Association (which specializes in the exploration of underground caves). The first three have international affiliations, so that membership in the larger organization makes it unnecessary to join the national one. There are no age limits for members, except that children younger than five years old cannot join the Youth Hostels Association. Individual membership fees are never more than $2.80 and there are special rates for families.

In Great Britain and Northern Ireland there are over 400 hostels altogether. In most of them members of the Youth Hostels Association pay about thirty-five cents a night for shelter and a bed. It is not necessary to make reservations ahead of time except in the larger centres during the summer. Usually hostellers are given the choice of purchasing meals or preparing them in the hostel kitchen. In London the Association operates a special shop in John Adam Street, off the Strand, which sells a great variety of inexpensive equipment for campers, hikers, cyclists and others. More information about the hostels of the United Kingdom may be obtained by writing to the Youth Hostels Association (England and Wales), 21 Bedford Street, London, N.W.1; the Scottish Youth Hostels Association, 7 Bruntsfield Crescent, Edinburgh 10, Scotland; or the Youth Hostels Association of Northern Ireland, 28 Bedford Street, Belfast, Northern Ireland.

In some of the National Forest Parks there are special facilities for members of the Camping Club of Great Britain and Ireland. There are thousands of acres of woodland, mountain, moor, and river to explore. Needless to say, the casual contacts with the people of the districts along the way hold a special charm for most visitors. There is no quicker way of becoming acquainted with the general character of the land and the qualities of its people. Within this club there are divisions catering to special interests such as cycling, mountain-climbing, art, photography, and canoeing. The address is 38 Grosvenor Gardens, London, S.W.1.

A surprising range of services is offered to its members by the Cyclists' Touring Club. Through it transportation can be arranged by land, sea or air; individual touring routes can be obtained and a list of 6,000 recommended addresses. Both the club's

handbook and its monthly Gazette contain a great deal of helpful information. Inquiries should be addressed to the Cyclists' Touring Club, 3 Craven Hill, London W.2.

No preliminary qualifications are required for membership in the Mountaineering Association. This body sponsors inexpensive evening courses in sixty different communities in Great Britain for people wishing to learn climbing techniques, skiing, map and compass reading, and mountain rescue methods. Starting in the spring, it offers practical two-week-vacation courses costing about $28. Its address is 102a Westbourne Grove, London, W.2.

The members of the British Speleological Association are referred to as "pot-holers", presumably because their pastime takes them underground and sometimes also under water. Two of their favourite haunts are Derbyshire and Yorkshire where mazes of caves, many still unexplored, stretch for miles far below the surface of the earth. Their activity carries with it an extra dash of excitement and, for those engaged in serious scientific studies, the hope of new and important discoveries. The Association's address is Settle, Yorkshire, England.

Edinburgh Festival 1956

This will be the tenth year of the International Festival of Music and Drama at Edinburgh. It will be held from 19 August to 28 September. It has been announced that the Hamburg State Orchestra will take the place of the Glyndebourne Orchestra this time, presenting Mozart's *The Magic Flute*, Richard Strauss' *Salome*, Stravinsky's *Mavra* and *Oedipus*, and Cornelius' *The Barber of Baghdad* (a comic opera based on the *Thousand and one Nights* legend, last performed at Covent Garden in 1906).

The Boston Symphony Orchestra, which will appear at the Festival for the first time in 1956, will give five concerts. Three of these will be conducted by Charles Munch and two by Pierre Monteux. At each concert a new work will be played, specially commissioned by the orchestra from a distinguished composer. The Royal Philharmonic Orchestra of London will give a series of concerts conducted by Sir Thomas Beecham. Several other orchestras will also participate, as well as chamber music groups.

Full details of other parts of the program were not available when this issue was going to press, but it was known that the Sadlers Wells Ballet Company would perform and that the Company of the Piccolo Theatre of Milan would appear in a traditional Italian comedy.

Five miles from Dulverton in Somerset are the famous Tarr Steps, a primitive bridge over the River Barle. The district's wooded glens are delightful places in which to ramble. U.K.I.O.

New Brunswick School of Arts and Crafts

The New Brunswick School of Arts and Crafts, which has not functioned since 1952, will be open again this summer in Fundy National Park. The school, established in 1950, was popular with tourists and residents during its short life. With the assistance of the Department of Northern Affairs and National Resources, the province intends to reopen it 1st July. It is expected that weaving, wood-turning, leatherwork, home upholstering, and various crafts will be taught.

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EDITOR'S NOTE BOOK

Dr. Marius Barbeau (*Oslo—Cultural Centre*) writes in this issue about the International Folk Music Conference which he attended in Oslo, Norway, last summer as Canadian representative. Dr. Barbeau has devoted his life to the study of ethnology and folklore. Although now retired from the National Museum of Canada, he continues to be very active in ethnological research. He is widely recognized as an authority in his field and is the author of numerous books and articles.

* * *

F. H. Wooding (*The Gallery of Canadian Fishes*) has contributed several articles to the *Journal* in the past. Mr. Wooding is Director of Information and Educational Services in the Department of Fisheries, Ottawa, and a Fellow of the Canadian Geographical Society. He is familiar with all phases of fisheries development and conservation.

* * *

Douglas Leechman (*Why "Kettle" Point?*) is well known as an archaeologist, author, lecturer and broadcaster. Formerly Chief Archaeologist of the National Museum of Canada, he is now Director of Western Canadiana at the Glenbow Foundation in Calgary. Dr. Leechman has written many articles for the *Journal*.

* * *

Adelaide Leitch (*Handicrafts Under the Midday Moon*) is a well known and popular freelance writer who has travelled extensively in Canada and Europe. Her articles and photographs frequently appear in the *Journal*.

* * *

George Kish (*The Pontine Fields*) has been Associate Professor of Geography at the University of Michigan in Ann Arbor, Michigan, since 1940. Born in Hungary, he received his education in Budapest, Paris, and Ann Arbor. He is now a citizen of the United States. The field investigations on which his article is based were conducted on a Fulbright Research Fellowship.

* * *

Beryl Scott (*Silver Islet Landing*) makes her first contribution to our magazine in this issue. Mrs. Scott is a freelance writer who lives in Fort William, Ontario. She takes a keen interest in the history of the district.

ERRATA

Vol. LII, No. 2, February 1956, p. 42, caption should read: The year 1927 marked an epoch in aviation history, when an original land plane such as the Moth above was converted into a seaplane. The Moth was especially useful in fire detection work.

Vol. LI, No. 5, November 1955, pp. X, review of the *East Africa Royal Commission 1953-1955 Report*, published by the United Kingdom Information Office: price should read $3.29; not $2.00 cloth, $1.40 paper.

A Personal Matter . . .

Just as there are many types of people, there are many types of investors. Some have substantial amounts to invest . . . many more have medium amounts. Some are familiar with the basic elements of sound investment, others have little experience . . . or in fact, no experience at all. With some, safety is a chief concern, others regard income as more important, and an increasing number are interested in acquiring sound securities with growth possibilities.

All this really means that no two people have *exactly* the same investment problem because no two requirements are *exactly* alike. But despite many differences there is one thing common to all investors . . . it is that every person's investment problem is a very personal matter . . . a subject that he doesn't care to discuss with just anyone but, nevertheless, a subject on which he will often welcome experienced help.

That is the kind of help which we can provide . . . and have been providing for many years. It may be the kind of assistance you would like to have. If so, we invite you to get in touch with us personally . . . by dropping in at any of our offices . . . or if more convenient, by mail. Either way, you'll be most welcome.

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AMONGST THE NEW BOOKS

A Journal of A Voyage from Rocky Mountain Portage in Peace River to the Source of Findlays Branch and North West Ward in Summer 1824.

by Samuel Black. Edited by E. E. Rich
(The Hudson's Bay Record Society, London)

The Hudson's Bay Record Society's most recent publication, given the short title, *Black's Rocky Mountain Journal 1824*, offers an exciting account of first explorations through the Canadian Rockies in what is now the Cassiar district of north central British Columbia. The writer, Samuel Black, was a leading North West and Hudson's Bay trader of those tumultuous early days, delegated by Sir George Simpson to investigate the headwaters of the Finlay River during the summer of 1824. The present volume contains the journal that he kept from 13th May to 28th September of that year, while traversing some of Canada's most difficult waters and remotest uplands and the first complete and scholarly commentary on it. Through the unpunctuated torrent of descriptive detail and misspellings Black looms up in all his "enormous stature" and endurance, rejoicing with vigorous word-pictures in nature's grandeur, referring tersely to his firm control, through terrible trials, over the little group of Company men and Indians under his amazing leadership, and sweeping the reader along with his own tremendous drive and energy.

The circumstances of his life, spent in savage and desolate regions, were of almost unrelieved harshness, yet Black had a warm understanding of the Indians with whom he had to deal, a quick sense of humour, a keen appreciation of men, and a sharp eye for detail—in business, as in the world about him. His narrative inspires a deep respect for those strong, lonely men who, like him, opened up the mountain fastnesses of Canada's great West. It also recalls the incalculable debt we owe to the Scottish element in our population, for he was born and brought up near Aberdeen in Scotland.

This book is a very handsome production in binding, printing and presentation of text. An admirable eighty-eight page Introduction gives full background information on Samuel Black and his "Rocky Mountain Journal 1824". The text of the Journal occupies a further 208 pages, followed by an Appendix containing eight short biographies of the men who accompanied Black on his voyage up the Finlay River. The volume is completed by an adequate Index, and a special map to illustrate the stages of the journey. ALFRED E. H. PETRIE

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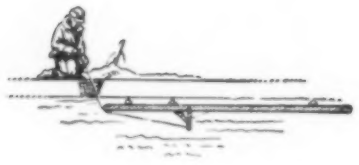
Fishing... at 60° below!

THE opening of commercial fishing in Great Slave Lake,—10,500 square miles of water in the Northwest Territories, the fifth largest lake on this continent—brought a new source of wealth to Canada. In the summer of 1954 and the winter of 1954-55 more than 7,000,000 lbs. of whitefish and trout, with a commercial value of more than $1,100,000 were taken from these cold Northern waters.

More than half of the total catch was taken in winter months, when fishing is done through the ice, in temperatures that on occasion dropped to 60 degrees below zero. A "jigger" was used to draw a rope from one ice hole to another. Gill nets attached to the rope were then set under the ice from hole to hole. The resulting catch of fine whitefish and trout gave fish of top quality from the cold deep waters of the Lake.



The "Jigger" is a cedar plank equipped with two levers to which a rope is attached. As the rope is pulled and released, activating the levers, the plank is propelled along as it floats hard against the ceiling of ice. When it has traversed the required distance another hole is cut to recover it and the attached line, by means of which the net is drawn to the proper position.

Natural temperatures aid in preserving the fish during transportation to the freezing and packing plants serving the area . . . but a deep respect goes to the hardy fishermen who risk the bitter cold their work entails.

All fisheries in the Northwest Territories are the result of research and development by the Fisheries Research Board of Canada, and are under the control of the federal Department of Fisheries. Representatives of the Department, (travelling in winter by snowmobile,) carry out their duties of conservation, enforcement of regulations, and inspection. The future of this great new resource is assured as a livelihood to many, and as an important factor in Canada's economy.

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Political Geography and The World Map

By Y. M. Goblet

(George Philip & Son Limited, London, England, 30s.)

After many years of research in political geography Mr. Goblet has attempted to summarize his conclusions in a short book of less than 300 pages. Evidence of long and detailed study is to be found on every page; indeed the number of references is so great that one can understand why the book has been published without an index.

The plan of the book is simple and attractive. An introductory section discusses the nature, evolution and methods of political geography; section two deals with the basic facts, territory, population, forces of expansion; section three differentiates between states and nations; section four discusses world relations of states as they are affected by routes, interdependence and frontiers; section five classifies states and studies their evolution and dissolution; section six discusses colonies; section seven discusses the great political regions of the world and the present map; and section eight states the conclusions.

To discuss so many complicated topics in such limited space is a task that would daunt most experts and it is a tribute to Mr. Goblet's scholarship that he has succeeded without at any time being overwhelmed by his material. But success has been achieved only by extreme condensation, which may impress the reader with the breadth of Mr. Goblet's knowledge but leaves one doubtful as to what the examples and analysis are meant to illustrate. Fewer examples (and these few more fully discussed) would have vastly improved the book.

The final chapters are particularly superficial. In eleven pages (and one full-page map) the characteristics of the eleven great world regions are given (the Pacific Ocean, the Insular Far East, the Continental Far East, the Eurasian Steppe, and the Indian subcontinent each receive one-half page), and what could have been a most valuable geographical survey ends in a very short list of very obvious facts.

Section one, dealing with the nature of political geography, is the least satisfactory part of the book. It is both vague and inconsistent. "Political Geography is that part of Human Geography which deals with those political complexes which have a territorial component. To these complexes it is as biology to living things" (p. 17). Though part of human geography "it has a distinct personality of its own, being rooted in General Geography" (p. 17), and it is at "the meeting place of General and Human Geography, and political science" (p. 19). (Is not human geography part of general geography?) Apparently all features of political complexes which have a territorial component are not the concern of political geography: "a political phenomenon belongs wholly or in part to political geography if at any time its study requires the use of geographical method" (p. 22); but since this method is defined as

(Continued on next page)

The Canadian Geographical Society

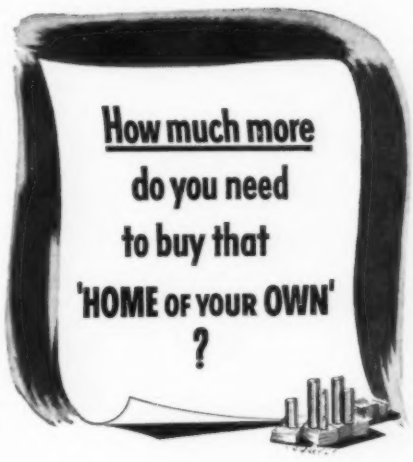
ANNUAL MEETING

The Society will hold its 27th Annual General Meeting in the Lecture Hall, National Museum of Canada, Ottawa, on Tuesday, 13 March 1956, at 8.30 p.m.

Speaker:

Leonard W. Brockington, C.M.G., Q.C., LL.D., D.C.L.

The address will be broadcast over the CBC radio network.



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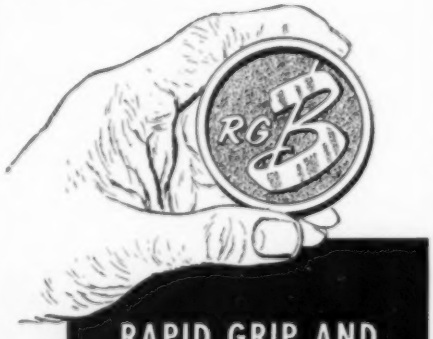

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(*Continued from previous page*)

"observation made on the ground, followed by analysis and classification of phenomena, explanation and seeking of laws" (p. 22) (isn't this the method of natural science?), it is difficult to imagine what might be excluded, especially since library research of original documents is accepted as "observation on the ground" (p. 27). Later, confusion is increased by the use of geography in such sentences as "The evolution of the extensive state is a question of geography rather than anthropology and geography" (p. 204).

It would seem that Mr. Goblet conceives political geography to be a systematic science concerned with a special category of facts. Its method is identical with that of the natural sciences — even to the making of experiments, in that "political geographical laboratory, the League of Nations". The Free City of Danzig and the mandatory system of colonial government are cited as examples of such experiments (but why are these not experiments in political science?). Nowhere does Mr. Goblet state how political geography is to be distinguished from political science, nor how the contribution of the geographer differs from that of the political scientist.

There are a few minor errors. Ratzel's dictum is given as "*Jede Staat ist ein Stuck Baden und Menschenheit*" (p. 9), instead of "*ein Stuck Menschheit und ein Menschliches Werk und zugleich ein Stuck Erdboden*," a significant difference since it prevents its use as a starting point for the organismic theory of the state. Chin, the early Chinese state, was not a "coastal state" (p. 194) but centred on the loess area in the present day Shensi and Shansi. The United States-Canadian boundary is the 49th, not the 59th, parallel (p. 47).

These blemishes do not destroy the value of the book, nor prevent it from being a very stimulating contribution. Every chapter presents fresh and arresting ideas, often without any elaboration or discussion, but all certain to start a geographer on a productive train of thought. The classification of states into "intensive" states, which in their evolution concentrate on the perfection of their optimum territory, and "extensive" states, which seek to extend their domain at the expense of others, is just one of the ideas provoking the reader to thought, especially when France is specified as "an intensive and national state at the summit of the evolutionary scale." In these provocative statements lie the great value of the book. GEORGE TATHAM